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GREATER YELLOWSTONE ECOSYSTEM

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ORIGINAL

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON PUBLIC LANDS

AND THE

SUBCOMMITTEE ON
NATIONAL PARKS AND RECREATION

OF THE

COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

FIRST SESSION

ON

GREATER YELLOWSTONE ECOSYSTEM

HEARING HELD IN WASHINGTON, DC
OCTOBER 24, 1985

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GREATER YELLOWSTONE ECOSYSTEM

THURSDAY, OCTOBER 24, 1985

House of Representatives,
Subcommittee on Public Lands,
and
Subcommittee on National Parks and Recreation,
Committee on Interior and Insular Affairs,
Washington, DC.

The subcommittees met, pursuant to call, at 9:45 a.m., in room 1324, Longworth House Office Building, Hon. John F. Seiberling (chairman of the Subcommittee on Public Lands) presiding.

Mr. Seiberling. The Subcommittee on Public Lands will please come to order.

First of all, if the people who are standing in back would like to sit in the front tier, or the lower tier, they are invited to do so. It is going to be a long day, so you might as well make yourselves comfortable.

You could occupy some of the end seats on the upper tier, too. So don't be bashful.

Our meeting today is a joint oversight hearing by the Subcommittee on Public Lands and the Subcommittee on National Parks and Recreation on management issues relating to the "Greater Yellowstone Ecosystem." I put that in quotes.

I would first like to thank my cochairman of this hearing, Congressman Bruce Vento, for his interest in the many issues that affect both our Nation's public lands and its great national parks. He is an outstanding chairman of the National Park Subcommittee and a hard-working member of the Public Lands Subcommittee, as well; a truly worthy successor to the late, great Phillip Burton.

I am pleased that we are able to hold this hearing jointly since the issues that affect the Greater Yellowstone Ecosystem are ones that transcend park boundaries and involve a wide variety of public resources.

Indeed, I would emphasize at the outset that the so-called Greater Yellowstone Ecosystem is not a statutory or official or even a clear scientific designation. Instead, it refers to the area within the States of Montana, Wyoming, and Idaho which contains not only the Yellowstone and Grand Teton National Parks, but also the Red Rock Lakes National Wildlife Refuge, the National Elk Refuge, and portions of the Gallatin, Custer, Shoshone, Bridger-Teton, Caribou, Targhee, and Beaverhead National Forests, and various wilderness areas designated therein.

As we pointed out in announcing this hearing, this is essentially a factfinding effort. There has been a great interest in this subject in the last few years and we concluded that it was time that the Congress took a look at it and focused the attention of the various agencies in the executive branch on this issue.

Our purpose is threefold. First, to examine the meaning and significance of the Greater Yellowstone Ecosystem, its natural, cultural, and recreational resources, and their associated economic and environmental values; second, to identify the various resource uses, their relative benefits, and any potential conflicts among them; and, third, to review the strengths and weaknesses of the State and Federal arrangements now in place for managing the ecosystem and its resources.

Yellowstone National Park is probably the most unique aggregation of geologic and biologic resources in the United States and perhaps in the world. It behooves us to make sure that we as trustees of this great national treasure live up to our obligations to preserve it in tact for future generations as long as man endures.

So I consider this to be a truly landmark hearing on a truly world-class issue and I am very pleased to join my colleagues and particularly Chairman Vento in this undertaking.

Mr. VENTO. Thank you.

Mr. SEIBERLING. Mr. Vento.

Mr. VENTO. Thank you, Mr. Chairman, for your kind remarks on my brief tenure as chairman of the Parks Subcommittee. Obviously, I am pleased to be here and coconvene this particular hearing. We have a distinguished list of witnesses.

I want to associate myself with your opening remarks and just mention that someone said when they created Yellowstone that this was the best idea they ever had in terms of creating a park. I think it is, but it comes to us today as a new challenge.

That is to say, the body of knowledge and what we saw or what was seen in 1872 as created is different than it is today. Clearly, Congress over the years has tried to address the changes, the dynamic nature of the needs of this park and of the greater community that surrounds it and the total ecosystem.

There has been 10 million acres in the so-called ecosystem. About 60 percent of that is either designated wilderness or parks, about 25 percent or 27 percent, I guess, as the Teton and Yellowstone National Park.

It comes to us then to try to get the political boundaries and the political jurisdiction which we create to work together to preserve what was initially set out as a goal and which is still the primary goal. It means some choices have to be made, some decisions have to be made with regard to this resource. I don't know the best way to do that. I hope today we hear from our witnesses and how we can accomplish that.

I know we can't accomplish it by, in essence, trying to accommodate everyone. I think there are choices to be made and we are going to have to address those choices today and in the future as we strive to protect this great resource.

Thank you, Mr. Chairman.

Mr. Seiberling. Thank you.

Are there any opening remarks on my right?

Mr. Marlenee.

Mr. Marlenee. Mr. Chairman, I do have some opening remarks, but the staff is busy correcting my spelling errors and they will be here just shortly. If I could yield to the other members.

Mr. Seiberling. Mr. Cheney.

Mr. Cheney. Thank you, Mr. Chairman. I look forward to today's hearing. As the Congressman from Wyoming who represents most of the area or certainly a vast portion of the area that is under consideration today, I have a deep interest, as do my constituents, in the operation of the Federal agencies that have the responsibility for managing our resources in that part of the world. I would like to be able to approach the discussion with an open mind.

I have been assured by the chairman that at present anyway there is no pending piece of legislation that we are looking at. What we are interested in today is an overview of where we are headed with respect to management of this important area.

I must say at the outset it is my intention to ask some very tough questions today. I think there are a number of people who have specific objectives in mind, perhaps from a legislative standpoint or would like to suggest fundamental legislative change in the way we manage this part of the world.

I think the burden is upon them to show that the current system needs repair. My own impression from having spent an enormous amount of time in the area—it is my favorite spot of the world, too, and I get there as often as I can—is, in fact, that generally we have first-class, professional management by the people that are involved.

There are, without question, issues that need to be addressed that crop up from time to time but I think an effort is going to have to be made by those who would recommend a change to show that somehow the current system with all of the various requirements that have already been imposed is not functioning properly.

So I look forward to a productive day's hearings. I would like to apologize in advance. I am going to have to slip out from time to time, Mr. Chairman, because I am serving on the Conference on the Deficit Reduction Program, but I will attempt to be here virtually all day long with few exceptions.

So I want to thank you for holding the hearing. These are important questions and I look forward to a productive day.

Mr. Seiberling. Thank you.

Are you ready yet, Mr. Marlenee?

Mr. Marlenee. Not yet, sir.

Mr. Seiberling. Mr. Darden.

Mr. Darden. Mr. Chairman, I have no opening statement except to extend a warm welcome to the very distinguished list of witnesses here and I look forward to their testimony today.

Mr. Seiberling. Any other opening remarks?

Mr. Hansen. Mr. Chairman, let me say with others I welcome the distinguished people we have here. I have spent a lot of hours with them and I appreciate the work that they do, especially the people in the Park Service I have been with recently.

I know how conscientious they are. And I feel very strong this should be a good hearing. I would hope that we see the problems as they emerge. A few years ago we got into a little flap called park protection. We played with that for a little while.

I would like taking on a problem as it comes up and handling them one at a time, and being a Congressman who represents more national parks and national monuments than probably any other Congressman there is, I feel very sensitive toward this issue. So, if there is a problem, let's fix it and if there is something wrong with Yellowstone, by all means, let's ferret it out and do something.

On the other hand, if there is no problem, let's leave it alone. I am one of those of the opinion, like Mr. Cheney, that we should do this on a 1-to-1 basis. If there is a problem in a specific place, let's look at it, but I spent many, many hours, I think more than anybody in this Congress, reviewing the last one we did on park protection.

I went to almost every one of those parks. In the whole report I only found one park that could be identified as a problem and that was a road by Glacier National Park. So I, like Mr. Cheney, intend to look at this in a very critical way and hope we can do our best at this hearing. I do commend the Chairman for bringing this hearing because I agree with him, it is a landmark hearing.

Thank you for giving me the time for those opening remarks.

Mr. Seiberling. Any other opening remarks?

All right. Well, our first witness today is a distinguished Member of the other body and former chairman of the Public Lands Subcommittee of the House Interior Committee, Hon. John Melcher, senior Senator from the State of Montana. We welcome you back to the House Interior Subcommittee on Public Lands, John. It is always good to see you.

STATEMENT OF HON. JOHN MELCHER, A U.S. SENATOR FROM THE STATE OF MONTANA

Mr. Melcher. Thank you very much, John.

I believe this is the first time I have been back to testify in this committee room and I am pleased to see you are here, John. I have to say that most of the other members of the two joint subcommittees are not here. Lots of things don't change.

I recall that maybe this same fine tradition takes place at the beginning of every Congress yet, but I recall that at the start of every Congress the ranking Republican member of the committee, the full committee, Mr. Sayer when I was here, would launch a full scale attack on why are these Indian pictures hanging here. One of them is particularly gruesome. Many of them look like they have been posed, but we have added Chairman Aspinall, Chairman Udall's picture behind.

I don't know whether they are supposed to match this outstanding collection of Indian art that I am sure Indians deplore themselves, but Chairman Aspinall and Chairman Haley all seem to find favor with them and left them hanging there.

The days I spent in this subcommittee and the full committee were very delightful days. I am glad to be back here after joining the other body, perhaps a more deliberate body, but also perhaps less productive body. I am glad to be back here testifying on what I think is a rather important subject.

I want to salute you, John, and you, Bruce, for staging these hearings. Yellowstone is very dear to us in Montana as I think it is dear to everybody in the country.

It is truly an outstanding recognition of our heritage. The marvels of geysers and wildlife and waterfalls really gives, I believe, everybody in the country that visits Yellowstone a sense that time really is immortal. John Colter was the first white person who recorded visiting Yellowstone after the Lewis and Clark expedition.

A lesser known fact about John Colter was he was quite a famous runner, too, having escaped attack by a band of pagan Indians somewhere around the Three Forks area. He was a sprinter to begin with because they gave him a chance, about 100 yards start down the—sprinted far enough to get himself hidden in one of the branches of one of the creeks flowing into the Gallatin, and then crawled out the next day out of his hiding place in the water and began a long jaunt down toward—down the Yellowstone—over the pass and down the Yellowstone to what we now associated with a small community called Big Horn, about a 250 mile jaunt.

It should be noted he was naked. The Indians didn't turn him loose with anything on, moccasins or a shred of clothes. But having relayed that little bit of history, let me tell you yet another personal bit of history. I first saw Yellowstone over 50 years ago and was amazed and enthralled with what we have there. Yellowstone is a first national park. In my mind because of its geyser basin and the wildlife, the waterfalls, the great lake there, I think it is the most outstanding of our national parks and since it is first in time and first in many people's opinion in this country as the best of all the national parks, I think it is very fitting that this hearing today on the area surrounding the park be undertaken.

I have three things that I want to point out. I have already mentioned them, but the geyser basin, which is one of three of the last of the greatest world renowned geyser basins, the wildlife values there and that sense of time immortal. First, on the Old Faithful, the other geyser there that forms the Yellowstone geyser basin, I think it was in 1981 that Senator Wolf and I held the hearing in Casper dealing with the possible geothermal drilling around Yellowstone, specifically out in what is called the Island Park area. That is located in Wyoming right adjacent to Yellowstone, not very far away from the Old Faithful.

There should be no drilling in Island Park or in any other area if there would be geothermal areas close to the geyser basin. I believe this is the only area that has even been considered for geothermal drilling, that is, Island Park, and it should be banned. We attempted since that hearing in Casper to do that legislatively and the first time we were successful last year in the Senate by attaching an amendment to the continuing resolution on appropriations.

This is an amendment to the effect that there could be no Federal money used in any of the drilling ventures which effectively prevents any geothermal development in Island Park. But that, as appropriation bills go, that is only for 1 year. This year I shall attempt to do the same thing again to make certain that there won't be drilling there.

I need only say about geothermal drilling that it could be—it could impair that geyser basin and to the extent that it would impair at all, it should be prohibited.

The only way to be certain of that is to prevent the geothermal drilling.

Second, on wildlife management, I have found perhaps the best time to visit Yellowstone to observe wildlife is in the winter. I have seen buffalo up close as well as elk, and mountain sheep, and moose. It is in my view a true delight, magnificent delight. The Madison is ice-free, which is in the park there, despite what the temperature may be, because the water is warm. There are swans, geese, and the ducks that are there are quite a winter delight for those of us who live in the upper Northwest. As to the management of the national parks, responsibility in Yellowstone and how it relates to the surrounding area, let me make four observations.

The elk that have to find sustenance during the winter time when the snow is heavy in the mountain and have to come down below often crowd out all available forage or devour all available forage and we sometimes find them in bad shape. The elk that are smart enough to winter out of that area under those circumstances and find the haystacks of adjoining ranches are not really welcome visitors, however pleased the rancher may be about elk when they are not in their haystacks. But I find it hard to agree with the Park Service policy of not providing hay under these extreme circumstances on the theory that the elk should be left alone in the natural condition, however severe that might be.

I might point out that while it may eliminate those elk who aren't smart enough to get out of there and find a forage from ranchers' haystacks, it might improve the strains of those particular groups of elk, by eliminating the ones that are too weak or too ignorant. It is kind of hard for a lot of us to take to see the dead elk lying there for lack of feed.

Also, with the mountain sheep, the recent corneal infection episodes blinded many of the older sheep and caused them to die. It seems to me to be a rather questionable practices of just allowing a disease of that nature to go untreated.

Third, on buffalo and brucellosis, the management of the Park Service is not satisfactory, at least as far as I am concerned. I think allowing brucellosis in the buffalo herds in the park without it being checked and the buffalo immunized against brucellosis is akin to the white man's introduction of small pox to native Americans, but at least we felt a responsibility that they should be allowed to have the vaccine.

The same for the buffalo. They didn't introduce brucellosis on this continent. Domestic animals did and they should not be left vulnerable to it.

Last, on grizzly bears, the question of management of grizzly bears is not easily solved or completely solved in all instances and I salute the efforts jointly made by the Park Service, and Forest Service, BLM, and the adjoining States' departments of wildlife in Idaho, Montana, and Wyoming.

It is a difficult problem to have people and grizzly bears together, but yet this is part of their last hold in the continental United

States and certainly we would want to maintain grizzly bears in Yellowstone, however difficult it is.

The third point I want to bring up, and it is my last point, Mr. Chairman, is that what I have called the effect of observing and enjoying, having the experience of visiting Yellowstone and getting that feeling of time immortal also applies to the area surrounding the parks or many of those areas.

Since most of the land surrounding the park is managed by the Forest Service, is in various national forests, the plans that those individual national forests develop have to reflect our concerns about the value, the high value that we place on Yellowstone itself.

As to the opportunity for recreation, it should be enhanced. I believe it can best be undertaken by the Forest Service in their individual forest plans and I applaud what I detect to be the tide of preponderate interest in developing these plans.

As all the committee knows, the Forest Service plans are developed with and only with the input of the public itself. The plans as they progress are reviewed by the public several times in public meetings but I have found the Forest Service has been available to discuss their plans with all interested parties at any stage in their development.

I think that is fine. The trend of giving more contribution to developing the plans to wildlife and recreation hand in hand with what is a preponderate public interest. Along that line, I will mention one example where I believe we can greatly enhance the ecosystem surrounding Yellowstone.

When I visited Yellowstone for the first time over 50 years ago, it certainly was not crowded. We can't say that today. Part of the problem that the National Park Service has to deal with, an ongoing problem, is how to handle the increased interest and visitation of the national parks and that also applies in particular to Yellowstone.

The opportunity to give the recreational experiences outside the park should not be ignored. The example I want to give is leaving the park from Cook City and taking the Beartooth Highway over the top of the Beartooth to Red Lodge Mountain.

That outstanding trip, I haven't measured it, haven't paid any attention to how far it is. I suspect it is less than 100 miles. That outstanding trip over the top of the Beartooth is one that it is almost a hidden, secret opportunity.

It can be enhanced—should be enhanced and I believe it must be enhanced. I do not view the National Park Service reaching out, outside of the confines of Yellowstone to develop these recreational opportunities.

I look to the Forest Service to do that in their planning. The Forest Service is, of course, inhibited, as all Federal agencies are at this particular time, in the past several years and on into the next several years, by lack of funds for any kind of proposal that would be—that would cost any amount of money. However, the cost in some of these areas are rather minimal. This is one of them. The opportunity for broadening the experience of many more Americans than is possible now in this area can be accomplished by the direction and the funding of the Forest Service to undertake such a venture. I only offer that one example.

I know many others will offer many other examples and there are other national parks as have been earlier discussed. But this is something that I believe fits within the confines of this hearing.

This point, the opportunity has not been undertaken. I believe it should and I believe the joint management of the Forest Service with the National Park Service with the State agencies, isn't just a bunch of testimony. It is an actuality.

To make it better, to make it better for the millions of Americans who want to visit Yellowstone, this is the way to do it. As I did when I served in the House, I now serve on the Agriculture, a comparable committee to the House Interior Committee. We call it Energy and Natural Resources over in the Senate, but it is the same. The jurisdiction may be split, but turf battles within the House and the Senate really have no relevancy to accomplish what is in the public interest.

This committee, this particular House Interior Committee has been successful in jointly working out with other committees that might share jurisdiction with this committee and I am sure, Mr. Chairman, both of you, that that will not be allowed to be an obstacle in the House. As far as the Senate is concerned, I think I can play the same type of cooperation between the two committees, the two obvious committees there that would have jurisdiction.

I applaud you for your efforts. I hope you are successful in developing a blueprint and guideline for what we hope to do in enhancing the public's enjoyment of Yellowstone.

Thank you very much.

Mr. **Seiberling**. Thank you very much for your testimony and for some excellent recommendations. I just have one basic question. In looking at the maps I note that elk and grizzly migration areas from Yellowstone Park are not toward the northeast. The areas east and south of Yellowstone Park are quite well covered by wilderness designations in the national forest, however, this is not the case on the west in Idaho or in the northwest in the Gallatin range in Montana.

I wonder what you think or if you have reached any conclusions as to what ought to be done with respect to these particular gaps in wilderness designation to protect the portions of the wildlife ecosystem that are not now so well protected.

I am particularly thinking of grizzly bear and elk migrations. Perhaps the elk migrations would not be particularly affected since they tend to go into the valleys in the wintertime in the north, but the grizzly bear migrations do extend for some distance north and west of the Yellowstone Park boundary.

Perhaps wilderness designations in those parts of the national forest would provide a much better protection for grizzlies as well as the park in general.

Mr. **Melcher**. I don't know that any further designation of wilderness—I will only speak to the Montana portion—could be practical at all. After all, a very important highway does run down to west Yellowstone and that isn't going to change.

The protection—the elk migration route through there doesn't seem to be impaired. We looked at it rather seriously in the last Congress before when we were dealing with the wilderness area and the special managment area there.

As to grizzlies themselves, of course, they are going to go wherever they please and no matter where they are at in the Rockies there our big problem is the confrontation with man. We had just in the past few days an incident where a couple of grizzlies surprised a couple of bird hunters and mauled—one of the gizzlies mauled one of the hunters rather severely.

While he is in critical condition, I haven't inquired to find out if there is any chance of dangering his life. I don't believe there is. The other hunter was not injured, and was not mauled, and he had to shoot at rather close range the grizzly that was in the process of attacking him.

That grizzly I believe wasn't killed by the bullet. The jaw was broken and the grizzly was destroyed afterwards. The real problem with grizzlies is their confrontation with man and that is going to happen. The only thing we can do since we are not going to be able to educate the grizzlies is to educate man and to be prepared to, when he is anywhere around them—these hunters were a long way away from any wilderness area—the Mission Mountain area would have been the only wilderness area and that is quite a distance from this particular incident.

We are simply going to have to educate man to be prepared for grizzlies far out away from wilderness areas because grizzlies are not going to recognize the boundaries naturally and they are going to find man occasionally and it is a rather dangerous episode when they do.

Mr. SEIBERLING. Well, from what I have read and I think in some of the testimony we will hear today there is the fact that grizzlies will avoid areas where human developments have taken place such as roads, clearcuts, and the like, and the concern is that the total areas that are available for the grizzly in the Yellowstone ecosystem if we just restrict them to Yellowstone Park are insufficient probably for the survival of the bear in that region.

So looking at the migration patterns I see they do extend outside the boundaries of the park to the northwest and to the west and that is why I raised the question.

Certainly, if we designated wilderness areas in the Island Park area it would accomplish the dual purpose of protecting the geothermal resources as well as the grizzlies to the extent they migrate over there.

But they apparently don't extend very far up into the Gallatin Range in the national forest there so perhaps a portion of that range might be considered for that purpose. That is the way it shapes up in my mind at the moment.

Mr. MELCHER. The two areas I mentioned, the special management and the Lee Metcalf Wilderness, in that particular direction come quite close to the park.

In drawing those boundaries we consulted with the very finest of the people who do study the grizzly bear and took some of their recommendations.

I believe we did as much as we could in that area. I won't speak to the Island Park areas as to its wilderness qualities. I doubt that could be accomplished as wilderness. There is a great deal of that land owned by the State of Idaho and it is privately owned.

Mr. SEIBERLING. Thank you very much.

Mr. Vento.

Mr. VENTO. Thank you, Mr. Chairman. It is always a pleasure, even though I haven't served with you on this committee, my service having commenced after you left the House. So I feel like I have been working with you and certainly the Senator from Montana, the senior Senator now, is a distinguished and respected Member in terms of this issue and is going to be playing a big part in any decisions that are made with regard to this area.

I think it is especially important you took the initiative and recognized the problem with the geysers and added that language. Today I think there is a little more consensus if I read the Director's statements with regard to that and I hope that is right.

But I think it is important you recognize the need to limit what type of activities go on in that area surounding the park and as they effect it. I don't know what the answer is. Are we here to learn today? I have learned some things from you. I hope to work with you on other issues like that. The problem I guess you know in that the bear is sort of the symbol here.

You mention the grizzly bear but the thing we have to remember is it is the whole ecosystem that is at stake here. That is just one of sort of the flashpoints when we talk about things. In the 5 years that the Interagency Task Force Group Committee, the Yellowstone group has been working, they estimate the grizzly bear population has dropped from 350, an optimistic 350 probably, to 200. Maybe that is pessimistic. I don't know, but that means there are some changes taking place and we have to address that.

Like you said, I don't think we are going to train the bears but we have to educate the people and we have to educate ourselves in terms of what the activities that we are doing are and how they effect them.

Whether it is a bridge, a campsite, and a lot of the people contact you know that shouldn't have taken place—maybe those bird hunters shouldn't have been in there hunting at that particular time of the year.

That is going to require personnel and that is going to generate conflict. I understand that. I am a hunter, you are a hunter. We don't want to give up our rights to go hunt some geese or to hunt something else. But that is where we are going. If that is the case of that task force we have to deal with the facts. It is a dynamic process. What was permissible 10 years ago in terms of our activities, whether it is camping, blueberry picking or hunting may not in 1985 or 1986. Those are tough decisions that we have to deal with.

But I guess the question is if we are going to create—if we want this natural system or at least as close to natural and we want it to prevail then we are going to have to accept some limitations in terms of what we do.

I think that is what we want. I think that was what was envisioned in this area. That is what people are looking for from the standpoint of tourism and visiting. I think that is what a 5-year-old John Melcher was looking at 50 years ago.

I hope I can't age you any more than you deserve to be aged, Senator.

Mr. MELCHER. You did me a little good there.

Mr. Vento. We want good will from the Senator because we need his cooperation in terms of whatever actions are taken. He has really been a leader in this area.

Mr. Melcher. Thank you.

Mr. Vento. I really appreciate the types of problems that the folks from Wyoming and Montana experience there but I also think we have to bring it up to reality.

I don't think we can sort of decentralize all these decisions. We have to give them some direction at the top. At least it has to come from the policymakers in the Department of the Interior and Congress. We are going to have our fights like over feeding the elk. I don't happen to agree with that. I think that ought to be permitted to go natural. Insofar as we fence them or limit their ranking we had better fence the cows and the other things if we can possibly do that.

But I do appreciate your comments and your presence here this morning.

Mr. Melcher. Thank you.

Mr. Seiberling. Thank you.

Mr. Marlenee.

Mr. Marlenee. Senator, welcome to the committee. I appreciate seeing my old friend and one who is intimately more acquainted with the whole State of Montana than I am, and has infinitely more experience than I do.

I would like to address the bear question first with you, Senator. You and I have worked very closely on past wilderness bills and past Forest Service problems.

Now, the good chairman of the committee said that bears migrate out to the northwest. Did we not when we created the Lee Metcalf Wilderness area put into that bill a very extensive game management area directly adjacent to the park.

Mr. Melcher. Yes, in the special management area in particular but the two—the bill itself established the parameters of the forest management practices around these areas too in the Gallatin.

Mr. Marlenee So we did accommodate the bear with the game management area.

Mr. Melcher. We certainly have and we would have had—I just want to say we reemphasized and reinforced the Endangered Species Act by leaving some area where grizzlies would be dominant. Everybody knows they are dominate and avoid them or at least be aware it is part of the grizzly bear habitat in the summertime and be careful. I guess everybody knows what time they come out of hibernation too.

Mr. Marlenee. Thank you, Senator. Further on the bear, the bears graze on herbs a good part of the summer after they have eaten the carrion and the carcases of the animals, et cetera.

Then they go to the herbs. In looking over the maps and the plotting by the Park Service itself with the assistance of the superintendent of the park, I see the greatest extent of those areas right within the park itself. I am not sure that we are of necessity forced to look for areas outside of the park.

There is a vast area inside of the park that shows the highest use by grizzly bears. As we move toward West Yellowstone, if my memory serves me correctly, the frequency of bear use drops considerably. So if we are talking about the bear going out the west side of the park and kind of trotting through western Yellowstone and the school grounds and attacking the kids and picking up the garbage and knocking over the cans on that private land in service to the park, I think we are kidding ourself about what we need to do in this particular bill.

I would like to ask you about the geothermal, Senator. You seem to have followed that considerably. In your opinion would the Senate or its committee or for that matter the House allow geothermal drilling within the approximate or close proximity to the park, or for that matter in quite a distance of the park, that would potentially damage that tremendous resource we have?

Mr. MELCHER. No. I don't think anybody in Congress confronted with that possibility would say anything but, whoa, stop, no dice.

Mr. MARLENEE. Shut it off.

Mr. MELCHER. Shut it off. I do believe that the Federal agency now would not contemplate it. However, geothermal leasing outside the park is permitted under law except to the extent that the amendment I had was attached to this 1 year of appropriations bills, but it is something like the Mansfield amendment that was attached to appropriations bills for at least 7 or 8 or 9 years that said, in effect, it said to the Forest Service, thou shall not remove region one headquarters from Mazzola, MT. Whatever the verbage was that is what it said. After that length of time the Forest Service said to us rather quiety, it is no longer necessary to put that kind of language in the bill, in the annual appropriation bill because we have no thought of moving region one headquarters out of Mazzola, MT.

I think a couple of years of having an appropriation bill, thou shall not allow geothermal drilling in Island Park will accomplish the same goal.

We will all be talking the same language but I would rest a lot easier if it was statutory language, and I have attempted to do that a number of times and will continue to attempt to do it.

There is evidence that is satisfactory to me that geothermal drilling in that year would probably damage to some extent this last of the real tremendously great world class geyser basins.

Mr. MARLENEE. I think we have eliminated it as a threat rather quickly if that threat was perceived to exist. Thank you, Senator. Thank you, Mr. Chairman.

Mr. SEIBERLING. Thank you. Any other questions?

Mr. CHENEY. No. I would simply like to thank the Senator for his testimony this morning, Mr. Chairman. Just listening stimulates my juices. Basically I would like to get into a debate but I don't think it is appropriate at this point.

I think we probably ought to give the opportunity to witnesses to be heard so I will withhold my questions until later.

Mr. SEIBERLING. Thank you very much, Senator. We appreciate very much your coming over and giving us your testimony. We certainly will take it very seriously.

Mr. MELCHER. Thank you.

Mr. SEIBERLING. All right. The next.

Mr. MARLENEE. Mr. Chairman.

Mr. SEIBERLING. Excuse me. Mr. Marlenee.

Mr. **Marlenee**. I would like, Mr. Chairman, to make a statement at this time.

Mr. **Seiberling**. The gentleman is recognized.

Mr. **Marlenee**. First of all, I would thank the chairman for this hearing. Every single one of us in this room would without equivocation protect Yellowstone Park. Most of us would assure that adverse impacts from adjacent public lands outside of the park would be moderated in such a way as to protect the park.

The statement, however, has been made that the park is being loved to death and there are those who would also protect it to death. There are those who would severely limit people's use in the park and worse yet, outside the park. When they or we create an ecosystem that does not take a balanced perspective, when the wolf introduction or the grizzly bear protection become so important or are used as a vehicle to close campgrounds, deny people access and literally create a sanctuary, they have lost the concept of the national park.

They have, in fact, protected it to death. What good is a park or public land without people? I am glad these hearings are taking place. Maybe now we can sort the facts from the fiction. There has been some manipulation of the media by releasing information that I think is without basis; perhaps that will now cease.

We need to ask ourselves a number of questions as we listen to all these good people. Are these so-called threats that we hear about bogus issues used for sensationlism to achieve yet another round of visibility, membership and acquisition and fundraising or are these issues valid, and if valid, are they being presently addressed by the park and/or agencies surrounding the park?

Are the tools—another question, are the tools there in place to address each of the issues that are raised or is there in fact instead a grab for power, another attempt to force agencies to manage the land surrounding the park for the benefit of a single excusive narrow band of people.

It appears that the word threat, threat has been prostituted for the sake of manipulation of the media by creating sensationalism in a maligning inference that Yellowstone Park is in itself threatened, inferences made that if each and every so-called threat is not immediately addressed the whole area will disintengrate into a dismal city slum, inferences made that we need or perhaps need super-legislation that would bypass all existing tools that can and do address the impacts of activity and I might add at great cost to the users of that land to the taxpayer and to the local people who have to live with that public land outside of the park.

This book lists 88 threats. I congratulate the authors and those who compiled it. There is something for everyone there. The majority of these threats that are listed, these 88 threats in this book, are not adjacent to the park. What is adjacent to the park and needs to be pointed out is 3.9 million acres of wilderness.

What is adjacent to the park is a block of public land that is managed, 74 percent roadless and wilderness. Of all land surrounding that park 74 percent is roadless and wilderness. The book lists 88 threats, some of which are not even remotely connected to Yellowstone Park, as I shall bring out in my questioning of the Department and the agencies.

The book lists 88 threats, 10 of which are timber sales, none of which are in the park or adjacent to the park, timber sales that are evaluated in conjunction and consultation with the National Park Service. This book lists 88 threats, 13 of which are recreational pursuits. The book lists 88 threats, 6 of which are forest plans which are developed by professionals, again in consultation with the Park Service.

The book lists a transmission line, miles from the park. The only thing this book appears to have missed is earthquakes and volcanos and actions by individual Congressmen. This book even lists wilderness and wild rivers as threats. Now, among the 88 listed threats, 23 are wilderness or wild river proposals. They list it as a threat when it is already wilderness adjacent to the park. There is a total acreage in the park of 3.9--wait a minute, 2.2 million acres in the park and 3.9 million acres of wilderness adjacent to the park. That will give you an idea of the balance and scope of those wilderness areas that surround Yellowstone National Park.

I didn't know that wilderness was a threat. Webster's New College Dictionary, on page 1,206 defines threat as an indication of something impending, example. that air holds the threat of rain or, two, an expression of intention to inflict evil, injury or damage.

The important questions are here today if as testimony will prove little if no threat exits to the park itself then are those who raise the issues raising them mainly on public lands outside the park?

If they are not threats to the park are they raising them on issues outside the park, on public lands outside the park. If, as testimony will prove, laws, regulations and controls already exist and are sufficient and are in fact being used such as the National Environmental Policy Act, the National Forest Management Act, Threatened and Endangered Species Act, the Clean Air Act, Clean Water Act and on and on and on and on, if these are being used, then should we assume that those raising the ecosystem and the threat issue want to force a much more restrictive, regulative, and exclusive use of all the lands surrounding the park and are willing to sacrifice the needs of the people of Montana, Wyoming, and Idaho who seek recreation and jobs from this wonderful, abundant and vast area of public lands surrounding the park?

I thank the chairman for those remarks.

Mr. SEIBERLING. Are there any other belated opening remarks? Mr. Udall.

The CHAIRMAN. I know this is an important matter. We have several witnesses to hear from and you can hear from me later. I congratulate you and Chairman Vento for holding these things about the frontier that really ought to be addressed.

Mr. SEIBERLING. Mr. Weaver? We will now proceed with our first panel.

It is a real pleasure to have Director Mott appear before this subcommittee for the first time, though I imagine he has been before the National Park Subcommittee already. He is one of the most distinguished members of the Land Management constellations in this administration.

We are very pleased to have his advice. We are also very pleased to have the Director of the BLM who has appeared before this committee probably more times than he would have liked but we are always glad to see him and to have the Deputy Director of the Fish and Wildlife Service appear.

Without further ado, Mr. Mott, you are on. Welcome.

[Prepared statements of Hon. William Penn Mott, Jr., Hon. Robert F. Burford, and Hon. Ronald E. Lambertson may be found in the appendix.]

PANEL FROM THE U.S. DEPARTMENT OF THE INTERIOR CONSISTING OF HON. WILLIAM PENN MOTT, JR., DIRECTOR, NATIONAL PARK SERVICE, ACCOMPANIED BY ROBERT B. BARBEE, SUPERINTENDENT, YELLOWSTONE NATIONAL PARK; ROBERT BURFORD, DIRECTOR, BUREAU OF LAND MANAGEMENT; AND RON LAMBERTSON, ACTING DEPUTY DIRECTOR, FISH AND WILDLIFE SERVICE

Mr. Mott. Mr. Chairman, and members of the committee, it is a pleasure to be here today to discuss the Yellowstone Ecosystem.

When the first expedition traveled on horseback through the wild lands of the Montana Territory in 1870, I sometimes wonder what these explorers' reactions were as they rode out of a dense lodgepole pine forest only to see, a few hundred yards away, an open basin marked by rising clouds of vapor and a column of steam and water shooting more than 100 feet into the air—Old Faithful, the geyser that has come to symbolize Yellowstone National Park. It was probably the same reaction that any first-time visitor to Yellowstone National Park experiences—awe and wonder.

Lt. Gustavus C. Doane, who provided support to these civilian explorers during their journey through the wild lands, reported that "As a country for sightseers, it is without parallel; as a field for scientific research, it promises great results; in the branches of geology, mineralogy, botany, zoology, and ornithology, it is probably the greatest laboratory that nature furnishes on the surface of the globe." For those who have had the privilege of visiting Yellowstone National Park, I believe that you will agree with this account.

Therefore, in retrospect it is not surprising that President Ulysses S. Grant signed a law on March 1, 1872, setting aside this land as our first national park. But, at that time in our Nation's history, our land base seemed endless, and life seemed relatively simple. What is surprising, though, in retrospect is the relatively complete boundary defined by the law establishing Yellowstone National Park.

A great number of significant features were included within those boundaries. However, as time passed and our knowledge of the park increased, boundary adjustments were made. With the last boundary change, which was signed into law on October 20, 1932, the park's boundary was solidified. Since then we have seen no need to change that boundary, and I see no reason to change it today.

Since 1932, our scientific knowledge has increased exponentially. With that knowledge has come a deeper appreciation that this park and many of its resources do not exist in isolation, but rather are directly related to the resources surrounding the park boundary. It is these relationships, which have come to be known to the public as the Yellowstone Ecosystem, we are discussing today.

Technically, the ecosystem system should be referred to as a biographic province rather than the ecosystem. Generally speaking, the art of the ecosystem management is in its infancy mainly because one must first ask, "How is that ecosystem defined? By whom? From what perspective?"

An example of our most notable attempt to define and, therefore, manage an ecosystem on public lands in an integrated fashion is illustrated in the work of the Interagency Grizzly Bear Committee. This interagency effort will be discussed in more detail by the Fish and Wildlife Service

More importantly, I would point out that this is not the only attempt by the land managing agencies to coordinate their planning and management. There are many formal and informal contacts among land managers to share information and to seek comments.

Superintendent Barbee, Yellowstone National Park, has accompanied me here today and can discuss these with you in more detail. To be sure, efforts must be strengthened to address the integrated planning and management of resources of the Greater Yellowstone area, an example being the geothermal features since 60 percent of the world's geysers are located within Yellowstone National Park.

Yellowstone National Park has been designated a World Heritage Site. That is of important significance to this committee. In fact, today we are proposing to do just that: Strengthen our efforts administratively through the establishment of interagency coordination, cooperation, and integrated land management to, one, review the concept of ecosystem planning and management. Two, define what should be included within this concept; and three, develop parameters within which the land managing agencies will operate to achieve the goal of ensuring the integrity of the resources.

I do not believe that you will find us divided on the general goal of ensuring the integrity of various resources that make up the Greater Yellowstone area. However, questions are raised about how these land managing agencies can accomplish this job given their differing mandates, and over what area or land mass this process should be placed. These are fair questions.

In fact, our professionals on the ground have been discussing both formally and informally possible answers to these questions over the past several years as more scientific evidence is developed and a greater understanding is achieved.

For the immediate future, I believe that we can trust the professionals who manage these lands as we begin this process. These field professionals, be they from the Forest Service, Fish and Wildlife Service, Bureau of Land Management, or the National Park Service, do not take their jobs lightly. I know that the Park Service professionals, from my first-hand experience, take seriously their mandate to "protect and preserve for the benefit and use of present and future generations." I will personally continue to oversee their efforts.

With regard to the incredible resources that make up the Greater Yellowstone area, in my mind there is little doubt about how future generations will judge our stewardship. It is not and will not be easy, but I firmly believe that we can and will accomplish our goals through the process I have outlined today. We will continue to keep the Congress informed of our progress.

In summary: One, the National Park Service, Mr. Chairman, is not proposing that the boundaries of Yellowstone National Park be extended. Two, the National Park Service, Mr. Chairman, is not proposing that any new management authority be given to the Bureau.

What we are suggesting, Mr. Chairman, is that the Congress encourage and support the collaboration that has been and will continue to be developed whereby the finite public domain will be managed under the stewardship of the various units of Government in cooperative management and understanding whereby these precious lands will be transmitted to future generations in the quality that past and present generations have enjoyed.

That concludes my formal testimony, Mr. Chairman. I would be happy to respond to any questions that your or members of the committee may have.

Mr. **Seiberling**. Thank you. First of all, there is a quorum call in process which I do not propose to respond to, but any members who wish to may do so, but I propose to go right ahead with the testimony of the other members of this panel if there is no objection to that.

There being none.

Mr. **Marlenee**. Reserving the right to object, Mr. Chairman, if some of us should go over to vote and we return immediately we do want the opportunity to question the witnesses.

Mr. **Seiberling**. We will reserve the right of everybody to question, but you all have the prepared statement of the witnesses so you can be reviewing them while other people are questioning, I presume.

So I think this would be the most expeditious way to proceed if there is no objection.

Mr. **Marlenee**. Withdraw my objection.

Mr. **Seiberling**. All right. We will now proceed with the next member of the panel, Mr. Burford. Welcome to our subcommittee again. Glad to see you are back in full swing.

Mr. **Burford**. I am glad to be back in full swing.

I would also like to recognize the chairman of the full committee. I note Chairman Udall.

The **Chairman**. I shall return. Happy to have you here.

Mr. **Burford**. Nice to see you again, sir.

I guess Mr. Vento was going to answer the quorum call.

I have prepared testimony which has been distributed, I believe, to all the Members. In looking at my testimony today I started wondering exactly where an ecosystem begins and where it ends. The definition in the dictionary is a complex community and its environment functioning as an ecological unit in nature. I would suggest that within the Greater Yellowstone Ecosystem we probably have several functioning systems, all of which are melded together and it is up to the agencies to take note of that fact.

We in BLM strongly endorse the concept of recognizing all the resources of the entire area. This includes the recreational, wildlife, mineral and other values. We firmly believe that existing statutory authority provides an adequate mechanism to protect the Greater Yellowstone Ecosystem and the multiple values of the nonpark Federal lands in that area.

At the same time we recognize the mineral and grazing values do not apply except where allowed by law as in the case of grazing within the park itself. Some people have identified this system as the area within the States of Montana, Wyoming, and Idaho, which contains Yellowstone and Grand Teton National Park, Red Rock Lake National Wildlife Refuge, the National Elk Refuge, and portions of the Gallatin, Custer, Shoshone, Bridger-Teton, Caribou, Beaverhead, and Targhee National Forests.

In noting this, the Members can see that the Bureau of Land Management itself plays a very minor role as far as surface management is concerned within the area. We do have probably close to 1 percent surface management responsibility for approximately 1 percent of the surface area within the area of the Greater Yellowstone Ecosystem, although it is hard for us to say exactly how many acres because there is no precise boundary in effect.

Over the last several years we have taken great care to closely coordinate with the other affected State and Federal agencies. Our Montana State office is represented on the Montana Bald Eagle Working Group, the Montana Peregrine Falcon Coordinating Committee, the Interagency Grizzly Bear Committee and the Grizzly Bear Research Committee.

The grizzly bear habitat on BLM lands in Montana consists of a few scattered parcels and is considered to be insignificant. Most of the habitat is under the jurisdiction of the U.S. Forest Service and the areas where we join the Forest Service we have cooperated with the various people responsible for that forest management in consideration of grizzly bear habitat.

There are no solid mineral leases on BLM administered lands in Montana within the areas identified as being part of the Greater Yellowstone area or biosystem. There are however, numerous mining claims recorded with BLM, but no estimate of numbers can be given without specific boundary identification of what lands are defined as within an ecosystem.

In Wyoming we administer only a small amount of Federal land. The National Park Service and U.S. Forest Service administer most of the Federal lands.

Wildlife habitat is one of the most significant resource values on the BLM administered lands. We administer the Whiskey Mountain Bighorn Sheep Area, the East Fork Elk Winter Range, and the only known population of black-footed ferrets. We are not sure whether these areas are considered in the Greater Yellowstone area or not. In managing these areas, we are involved in cooperative management with all the other Federal agencies and the State.

We do have three BLM wilderness study areas that may be within the Wyoming portion of the Greater Yellowstone area. These three areas are Owl Creek, Whiskey Mountain, and the Dubois Badlands. Recreation use on the BLM administered lands in Wyoming within the Greater Yellowstone area is extensive. Hunting, fishing and, to a lesser extent, hiking, backpacking and offroad vehicle use are the major recreational activities. We have no specific visitor use figures on the limited amount of BLM land. I think that is about 90,000 acres in Wyoming.

We have several special recreation permits issued in the Dubois area for guide and outfitter operations.

With regard to locatable minerals, Wyoming Geological Survey publications indicate that northwestern Wyoming is highly mineralized. Numerous areas containing gold, copper, lead, silver, molybdenum, zinc, asbestos and gypsum are scattered over the area. We estimate that there are presently 5,000 to 6,000 mining claims in the area of Wyoming which may be considered the Greater Yellowstone area.

We have issued a few free-use permits for highway purposes for salable minerals. There are no solid leasable minerals. In other words, this is not a coal or soda ash area.

With regard to fluid leasable minerals in Wyoming, the area southwest of the Yellowstone area is dominated by the Idaho-Wyoming overthrust belt. This is one part of the overthrust that has been largely untested. We estimate we have approximately 2,000 to 3,000 oil and gas leases in the area. These leases contain adequate provisions for protection of the environment.

There are no geothermal leases in effect in Wyoming. There are some geothermal springs in the area, but the potential is classified as low.

Lands in Idaho that may be within the Greater Yellowstone area are limited to portions of one BLM resource area operating out of our Idaho Falls district office. In addition to the livestock and timber values, the BLM areas have wildlife and recreation values.

One area is a crucial big-game winter range that is especially important to elk, many of which migrate from the Yellowstone Park area. We maintain close cooperation in both management and research with the Idaho Department of Fish and Game, and also, I might add, with the U.S. Fish and Wildlife Service.

The south fork of the Snake River is a major bald eagle nesting and roosting area. We have close cooperation with the Idaho Department of Fish and Game, U.S. Forest Service, U.S. Fish and Wildlife Service, and several local agencies in managing this area. This stretch of river is a major float trip recreation area and it is possible that in the future conflicts may occur between eagles and recreation users. Other potential conflicts include housing developments along the river, firewood cutting, and gravel removal.

There is a law suit involving that river which has been going on for some 20 years and still is not settled as to the exact ownership of some of the lands along the Snake River. We cooperate with all the other agencies and the State on threatened and endangered species such as grizzly bears and wolves, but they rarely occur on BLM-administered lands.

Whooping cranes from the Gray Lake Refuge just south of the Greater Yellowstone area may occasionally travel into the area. Efforts to reestablish peregrine falcon are being undertaken at the Red Rock Lakes Refuge near Palisades Reservoir.

The U.S. Geological Survey established the Island Park Know Geothermal Resource Area just west of Yellowstone Park in 1975 because of the overlapping geothermal lease applications. The Secretary of the Interior has the authority to prohibit drilling or leasing if it would harm Yellowstone.

As was noted by the first speaker, Senator Melcher, there has been a paragraph in the Budget Act that prohibits the U.S. Geological Survey from drilling any test wells in the area. The purpose of those test wells was to establish whether there was any connection between the Yellowstone geysers and this geothermal area.

As long as those test wells cannot be drilled, we cannot determine whether or not there is any connection. Most geologists feel there is not a connection, but we have no primary proof. We, of course, in managing mineral resources, write environmental impact statements.

Before we approve any permits to drill we also write environmental impact statements and at the time of closure of wells. These documents are all developed with the involvement of the public and the agencies with special expertise or administrative responsibilities in the area including USGS and the National Park Service. We especially work closely with the Forest Service because there are a good many leases in that area on Forest Service land.

Any ground activity that is approved must have been considered in an environmental impact statement or an environmental assessment with public input. We must assure not only the public but the other agencies that all surface and subsurface resources are protected. The State of Wyoming has extended this so far that when the last test wells were drilled all equipment was entirely transported by wheels or dropped into the area and everything was transported out at the end of the day. We in the Bureau of Land Management firmly believe that the existing statutory authority combined with the memorandums of understanding—which we have with the Park Service, the U.S. Forest Service, U.S. Fish and Wildlife Service, the affected three States, as well as numerous counties within those States—can protect the values of the Greater Yellowstone area and we think that this system, which has been in existence for several years and has been expanded extensively in the last 3 or 4 years, does provide the means of protection and the means of allowing that habitat for wildlife and the protection of those underground resources to exist.

We do not believe that additional legislation is necessary.

That completes my statement.

Mr. VENTO [presiding]. Thank you, Mr. Burford, for your testimony. For the record, I would request that you submit the memorandum of understanding between the interagencies with regards to the management of this area and any agreements that you have with the States and we will be able to get back to that more in some of the questioning as to the dates and relevance of those for purposes of this hearing.

Mr. BURFORD. I don't have those MOU's with me, but we will submit them for the record.

Mr. VENTO. Thank you, Mr. Burford.

[EDITOR'S NOTE.—The above-mentioned MOU's may be found in the appendix. See table of contents for page number.]

Mr. VENTO. The next witness on this panel is Mr. Ron Lambertson, Acting Deputy Director, Fish and Wildlife Service, Department of the Interior.

Welcome to the joint subcommittee, Mr. Lambertson.

Mr. LAMBERTSON. Thank you, Mr. Chairman.

With your permission, I will submit the full statement and merely summarize.

Mr. VENTO. Without objection, this will be made part of the record. Please proceed.

Mr. LAMBERTSON. I would first like to address briefly the involvement and activities on grizzly bear recovery and management in the Yellowstone Ecosystem. Due to the bear's wide-ranging nature and the factors influencing its distribution, a multitude of agencies and jurisdictions are involved in grizzly bear management; and a coordinated recovery effort involving State and Federal agencies has been essential to ensure the best utilization of resources and avoid any duplication of effort.

In April 1983 a Memorandum of Agreement [MOA] was signed between the Department of Agriculture and the Department of the Interior, establishing an Interagency Grizzly Bear Committee [IGBC]. The MOA was expanded and revised in April 1984 and was signed by the Governors of the States of Wyoming, Montana, Idaho, and Washington. The coordinating committee was formed to further interagency coordination and cooperation essential to recovery of the bear. It serves as the primary coordinating mechanism for research, management, and funding needs for the grizzly bear in the lower 48 States.

[EDITOR'S NOTE.—The above-mentioned Memorandum of Agreement may be found in the appendix. See table of contents for page number.]

Mr. LAMBERTSON. Recent interagency management efforts have also concentrated on minimizing human/bear conflicts and preserving habitat areas critical to bears. Concerted efforts have been made to clean up the garbage and storage problems existing not only in the backcountry but in towns such as West Yellowstone and Gardiner, MT.

Conservation groups, Federal and State agencies, and local governments are cooperating to clean up problem areas and purchase bear-proof dumpsters. Several national forests have also installed large metal lockers and 12-foot-high meat poles at backcountry campsites to provide bear-proof storage for food, game meat, et cetera, and thus reduce the attractants for bears, and hopefully bear/human conflicts as well.

A coordinated interagency law enforcement effort was initiated in the Yellowstone Ecosystem in 1983 and continues to show positive results. This effort is aimed at decreasing potential bear/human conflicts and the illegal killing of grizzly bears. During 1984 alone, over 65 individual agents from the three State and three Federal agencies involved patrolled the backcountry.

In addition, the Fish and Wildlife Service administers two national wildlife refuges within the Greater Yellowstone area—Red Rock Lakes, located to the west in the Centennial Valley of Montana and National Elk, to the south in the Jackson Hole area of Wyoming.

The 40,300-acre Red Rock Lakes Refuge was established in 1935 to protect habitat for the then endangered trumpeter swan. While Red Rock Lakes is a rather isolated station, it cannot be operated in a vacuum, and therefore, numerous cooperative management efforts are taking place with other national and State agencies.

The 25,000 acre National Elk Refuge was established by Congress in 1912 to acquire, preserve, and manage lands for the wintering elk of Jackson Hole. A major management effort of that refuge is the winter supplemental feeding of elk which is accomplished under the direction of the cooperative agreement between the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department dated 1974.

Under this agreement the refuge elk herd is not to exceed 7,500 animals. Because of the importance of the elk in Jackson Hole area and because of the legal responsibilities for study and management of these areas, a memorandum of understanding covering the Jackson Hole Cooperative Elk Studies Group has been in existence since 1959. In addition, there are numerous other cooperative agreements associated with those two refuges.

Mr. Chairman, that concludes a brief summary of my prepared statement and I would be happy to answer any questions.

Mr. **Seiberling** [presiding]. Thank you very much.

That brings us to a question period. Let me start out by questioning Superintendent Mott, but before I do that, I want to also welcome Superintendent Barbee to our hearing. You have no prepared statement, I presume, Superintendent Barbee?

Mr. **Barbee**. No, Mr. Chairman, I don't.

Mr. **Seiberling**. Do you have any remarks you would like to get off your chest?

Mr. **Barbee**. I believe our Director, Mr. Mott, spoke generally for us so I will certainly be happy to answer any questions that I can.

Mr. **Seiberling**. All right.

Mr. **Marlenee**. Would the chairman yield?

Mr. **Seiberling**. Yes.

Mr. **Marlenee**. I would also like to welcome Bob Barbee, superintendent to Yellowstone Park. He is one of the greatest guys down there in the management of our park system, hospitality extended to everyone and has a tremendous job and workload in the management of that huge and pristine and wonderful area we have down there and I think does a pretty darn good job. Welcome.

Mr. **Seiberling**. Thank you.

Mr. **Marlenee**. Thank the chairman for yielding.

Mr. **Seiberling**. Let me start out with Director Mott.

Mr. Director, what is the status of the general management plans and the natural and cultural resource management plans for Yellowstone and Grand Teton National Parks? Are those plans completed, do you know?

Mr. **Barbee**. Mr. Chairman, I can speak for Yellowstone National Park. The national resource management plans have been completed. Under way and nearly completed is a fairly comprehensive cultural resource management plan and the general management plan that offers direction for approximately a 10- to 15-year period for Yellowstone was completed in 1974 and we are operating generally under its direction today.

Mr. **Seiberling**. Has this been updated recently?

Mr. **Barbee**. Well, the general management plan is updated through a mechanism known as a statement for management which is periodically reviewed and updated and is a matter of public record and currently the most recent update is in draft form.

Mr. Seiberling. How much flexibility do the plans grant to the superintendents? That is, what actions are required by the plans and what management options are in your discretion?

Mr. Barbee. Well, I feel that we have a commitment to following the general management plan. It gives broad direction. It does not give specific, detailed direction. So there is a certain amount of flexibility. But even that flexibility is subject to some more detailed planning known as the development concept plans and so on.

So we are constrained to a considerable degree but there is flexibility.

Mr. Seiberling. Does the Park Service provide specific written comments on management plans prepared by other Federal agencies that have land in the Greater Yellowstone area such as the Fish and Wildlife Service, BLM, and the National Forest Service?

Mr. Barbee. Yes, sir. We do have the opportunity to comment on those plans and we do that in a formal way and also on a sustained basis and an informal way, at least to the extent that our staff time allows.

Mr. Seiberling. To what extent are your comments reflected in the actual final plan?

Mr. Barbee. Well, I presume, Mr. Chairman, you are referring to the forest plans?

Mr. Seiberling. Yes.

Mr. Barbee. Those plans are currently being reviewed at this time and so far any measurable influence that we may have in that planning process is yet to be seen, but we are confident that working with the managers in the Greater Yellowstone area if there are any differences, we are able to work them out.

Mr. Seiberling. How about Fish and Wildlife Service? Do they have management plans, Mr. Lambertson?

Mr. Lambertson. Yes. Mr. Chairman, it is the Fish and Wildlife Service policy that there are to be no activities on national wildlife refuges unless there is first in place a management plan for that activity. For that reason, we have very specific plans to cover recreational activities, management of the elk, management of the trumpeter swan, wilderness management plans, and other management plans of that type.

Mr. Seiberling. Do you have a general management plan covering the whole area?

Mr. Lambertson. No; we do not, sir. Our management plans are limited to the specific refuges.

Mr. Seiberling. How much do you take into account recommendations of the Park Service in developing your plan?

Mr. Lambertson. I was out there and looked into that very specifically myself this summer, Mr. Chairman, and I found very close coordination between our refuge personnel and park personnel. Now that is for our refuge management activities. In addition, we have endangered species and other activities that are coordinated and they are not necessarily land related.

Mr. Seiberling. I understand that the BLM lands in the area are not extensive but they have extensive mineral leasing activities in the area. Are there any general plans that BLM has with respect to mineral leasing?

Mr. BURFORD. Those mineral leasing plans are all included in our resource management plans and I think I went over some of the approximate number of leases. I think Wyoming's was 2,000 to 3,000 oil and gas leases south of the Yellowstone area. Most of these are on Forest Service lands and many of them have been held up by a court decision.

Mr. SEIBERLING. Do the Park Service and the Fish and Wildlife Service comment on your general management plans?

Mr. BURFORD. Yes, they do.

Mr. SEIBERLING. To what extent do you take their comments into account in developing the plans?

Mr. BURFORD. It would be hard to determine exactly to what extent. We weigh the comment of every agency as well as the comment of the public in trying to establish a plan and do try to take into consideration any of their concerns, especially in the areas immediately adjacent to a park or a refuge.

Mr. SEIBERLING. Aside from the grizzly bear memorandum of agreement which you mentioned, Mr. Lambertson, I wonder if Mr. Mott or any of the panel can tell us what other specific structural arrangements there are, if any, to coordinate planning and administration among the National Park Service, the BLM, Fish and Wildlife Service in the area, that is within the Interior Department and between them and the National Forest Service?

Mr. LAMBERTSON. Let me start, Mr. Chairman. We have attached to my testimony a list of all of the cooperative agreements that we have not only with other Federal agencies but with State agencies in the area to help us cooperatively manage those lands. You will see that list covers everything from firefighting to inventorying and censusing the trumpeter swan population.

[EDITOR'S NOTE.—The above-mentioned cooperative agreements may be found in the appendix. See table of contents for page number.]

We find that there is a lot of close coordination, both formal and informal, by the land-managing agencies. In addition, as you mentioned, the grizzly bear is covered by the Endangered Species Act which is a legislative mandate that there be careful coordination and very specifically requires that other Federal agencies take the responsibility for threatened and endangered species.

In addition to that, we have migratory bird responsibilities as far as eagle management and peregrine falcon re-introductions that are also done jointly by these kinds of plans.

Mr. SEIBERLING. At what level does this coordination take place?

Mr. LAMBERTSON. At the level of our field biologists primarily.

Mr. SEIBERLING. Is there any coordination at the Washington level?

Mr. LAMBERTSON. To the extent that it is necessary to facilitate—for example, the grizzly bear arrangement was facilitated through an arrangement at the Washington level, but most of this occurs at the field level.

Mr. SEIBERLING. When the BLM is considering whether to open up an area to oil and gas leasing, what structural arrangements are there for them to coordinate with the Fish and Wildlife Service with respect to grizzly bears and with the Park Service with respect to impact on the park?

Mr. LAMBERTSON. Let me start out with the grizzly bear. The Endangered Species Act is very specific as to how land-managing agencies are to consult with the Fish and Wildlife Service and other known experts before they take an action that may affect an endangered species. That is a very strictly enforced law. We have good coordination and cooperation with the Federal agencies on the implementation of that.

Mr. SEIBERLING. How about the impact on the park?

Mr. BARBEE. Mr. Chairman, could you please——

Mr. SEIBERLING. The question was when the BLM is considering whether to open up an area in the vicinity of Yellowstone to oil and gas leasing, what arrangements are there to consider the impact on the park? What does the Park Service do and what does the BLM do in considering that question?

I understand, for example, there are just north of the park extensive areas that have already been leased under the lottery system, for example. What arrangements or coordination was there between the Park Service and the BLM before that decision was made?

Mr. BARBEE. Well, Mr. Chairman, I don't believe I can answer that question. I have been at Yellowstone about 3 years. Much of this took place before my arrival.

Mr. SEIBERLING. Maybe Mr. Burford can answer the question.

Mr. BURFORD. There is a certain amount of coordination but most of that leasing also took place before my arrival and I don't have the specific examples. However, we do notify the Park Service as well as the Fish and Wildlife Service. As you know, there is no leasing that goes on in the refuges or in the parks themselves. That is a fact; there will be no leasing within the park that has been identified by the chairman.

Mr. MARLENEE. Will the chairman yield?

Mr. SEIBERLING. I will be happy to.

Mr. MARLENEE. When the chairman referred to areas north of the park and I think my colleague from Wyoming is looking at his area, I don't see any BLM land. For that matter, it is mostly Forest Service land.

Mr. SEIBERLING. The BLM does all leasing whether it is BLM land or Forest Service land.

Mr. MARLENEE. If the chairman would yield further. What is the closest point on the north side of the park that we have had a lease occur?

Mr. SEIBERLING. Any answer to that?

Mr. BURFORD. I don't have that answer with me. I can provide that for the committee.

[EDITOR'S NOTE.—In response to Mr. Marlenee's question, the Department subsequently supplied the following additional information:]

The closest lease on the north side of the park is about 3½ miles away.

Mr. BURFORD. I would add, though, that leasing on national forest lands is under the purview of the Bureau of Land Management, but the Forest Service has a veto, and they are the ones that say whether we can or cannot lease on lands which have been made national forests out of the public domain.

Mr. Seiberling. I didn't understand they had a veto. I merely thought they gave advice.

Mr. Burford. In essence, it is a veto. They recommend to us whether we lease or not lease, and although we can override, there have been very, very few instances of an override, which I think Chief Peterson will probably verify in his testimony.

Mr. Seiberling. Now, I have read your statement about the description of how you proceed with leasing but I note that no environmental impact statement is prepared before you decide whether to have leasing in a particular area; is that correct?

Mr. Burford. We do have a land management plan which is accompanied by an environmental impact statement on that land management plan and leasing then takes place, but no specific action on the ground can take place until either an environmental assessment or environmental impact statement is written.

The act of leasing itself does not have any effect whatsoever on the surface or subsurface of the ground.

Mr. Seiberling. I note that you wait until you have an actual application for a permit to drill and then you evaluate the particular one.

Mr. Burford. That is correct.

Mr. Seiberling. Have you ever denied a permit on any grounds that the area was not suited for drilling?

Mr. Burford. Yes, sir.

Mr. Seiberling. Could you supply a list of those that have been denied in the last 5 or 10 years for the committee, and the basis on which they were denied?

Mr. Burford. Would you clarify whether you want 5 or 10 years?

Mr. Seiberling. Let's say 10 years in the Greater Yellowstone area.

Mr. Burford. Ten years in the Greater Yellowstone area.

Mr. Seiberling. Yes.

Mr. Burford. I am not sure how long we keep those.

Mr. Seiberling. If the records don't go back that far, whatever you have.

Mr. Burford. In the Greater Yellowstone area 10 years ago there was no activity whatsoever. I think that within the past 5 years would cover everything you want.

Mr. Seiberling. All right. Fine.

[Editor's note.—In response to Mr. Seiberling's question, the Department subsequently supplied the following additional information:]

> We are not aware of the denial of any applications for permit to drill near Yellowstone National Park in recent years.

Mr. Marlenee. Would the chairman yield?

Mr. Seiberling. Yes.

Mr. Marlenee. I think to show the relativity of it that we should show how many actual applications there were, how many were denied and I think that is the chairman's intention.

In looking at this, I would broaden the chairman's request if he would as it appears to me that there has been no and could be no drilling activity north of the park for a considerable number of miles because of the creation of the Absaroka/Beartooth Wilderness area. Absolutely no drilling within the proximity of the park could occur because of that wilderness area creation.

Mr. SEIBERLING. Well, the facts will be whatever they are. We are merely asking for information.

Mr. MARLENEE. I thank the chairman for yielding.

Mr. SEIBERLING. Mr. Mott.

Mr. MOTT. John Varley, our chief scientist, I think can shed some light on this particular subject if you would like to have him respond to your question.

Mr. SEIBERLING. Fine.

Mr. VARLEY. We have both leases and lease application at numerous points immediately adjacent to the boundary including both leases and application immediately north of the northwest corner of the park and extensive oil an gas leases and application on the west boundary of the park, including in the Island Park geothermal area.

Mr. SEIBERLING. Thank you. Well, I would also like to know what is in the environmental assessments that were prepared with respect to those lease years. In other words, we would like copies of the environmental assessments if you could supply them, Mr. Burford.

Mr. BURFORD. Yes.

Mr. SEIBERLING. Thank you.

[EDITOR'S NOTE.—The above-mentioned document may be found in the appendix. See table of contents for page number.]

Mr. SEIBERLING. Mr. Mott, did you have any other comment?

Mr. MOTT. No; I do not, Mr. Chairman.

Mr. SEIBERLING. All right. Well, now just one other comment. Are the procedures the same for oil, gas, and geothermal leasing basically?

Mr. BURFORD. Not quite the same. They are fairly similar. I can supply for the committee the exact differences.

Mr. SEIBERLING. All right. Thank you.

[EDITOR'S NOTE.—In response to Mr Seiberling's question, the Department subsequently supplied the following additional information:]

> Oil and gas leasing on U.S. Forest Service lands does not always require U.S. Forest Service consent, as is the case with geothemal leasing on such lands. However, as a matter of policy, the Bureau of Land Management does not act in a manner inconsistent with recommendations of the U.S. Forest Service.

Mr. SEIBERLING. My time has expired.

Mr. Vento.

Mr. VENTO. Thank you, Mr. Chairman.

This is the first time that Mr. Mott has appeared before the Interior Committee, Mr. Chairman, so it is good to see him. We hope we will see him more often in the future with regards to the issues that we have before us.

Mr. SEIBERLING. We are doubly gratified.

Mr. VENTO. We realize, Mr. Mott, you are getting started and you have been saying some good things, I think providing some direction that was needed with regard to the Park Service and I want to publicly commend you for it. I look at this issue a little broader. I think that the whole issue with regard to park protection, and buffer zones, and all those other buzz words that we hear grew out of kind of a debate about doing what the Organic Act says with regards to the parks.

Invariably, as I indicated in my opening comments, I think that there is going to be more conflicts. We are going to have to make some choices. I don't purport to know how we are going to go about doing that. Obviously providing a new mandate with regards to that does not seem to be in the cards.

You are not proposing it. Our proposals fell on deaf ears in the Senate, so now we are trying to do it administratively because those that opposed doing it, providing a new charter, so to speak, or a renewed charter, said that you had the legal authority to do it and, therefore, you ought to do it. It comes down to specifics like the grizzly bear, and all these memorandums of understanding, and agreements, and how all that bureaucratic mish-mash works to provide what I think we all want to do.

You know, this oil lease that the chairman, Mr. Seiberling, brought up, is a good case in point. Your scientist came up and said we have oil leases on the north border and on the west border almost adjacent to the park. The question is what was the park's advice to BLM and to the Forest Service in that particular instance?

Mr. Barbee, can you speak to that?

Mr. **Barbee**. Well, again, Mr. Vento, would you——

Mr. **Vento**. What was your advice to the BLM or to the Forest Service with respect to the oil leases immediately to the north and to the west that we just got through being outlined? How did you consult them?

Mr. **Barbee**. We were not involved in the consultation process, as far as I know. Again, most of those lease applications and so on were filed before my arrival to Yellowstone, so I don't know specifically.

Mr. **Vento**. We are not trying to judge individuals. I am trying to look at this in a broad sense in terms of how the process works. How would you react to that, Mr. Mott?

Mr. **Mott**. Well, there has not been any leases called to my attention since I have been here, so I am not sure. I would assume from what has been said that we would have an opportunity to discuss this subject and if these oil wells are adjacent to the park—or geothermal activity adjacent to the national park—and we feel that they are going to be detrimental to that particular resource, I certainly would object to those being developed.

Mr. **Vento**. I suspect that to be the case, but it sounds to me like everyone has sort of got tunnel vision here a little bit. This is my turf, and this is your turf, and this is someone else's turf, and we are all sort of going down there and the fact is that the legal mandate of BLM, or Forest Service, or the National Park Service has to reach a point in the realm of cooperation here.

The fact of the matter is some of the stuff is falling between the cracks.

Mr. **Seiberling**. Perhaps if the gentleman would yield, BLM could supply for the record and the Park Service supply for the record whatever documents there are indicating consultation before those leases were granted. Could that be done, Mr. Mott?

Mr. MOTT. Yes, I am sure it could.

[EDITOR'S NOTE.—In response to Mr. Seiberling's question, the Department subsequently supplied the following additional information:]

Yellowstone National Park officials have been invited to comment on all Environmental Assessments prepared for oil and gas activity in the vicinity of the park. Development of such documents occurs with the full involvement of the interested public and agencies with special expertise or administrative responsibibilites in the area, including the U.S. Geological Survey and the National Park Service.

Mr. MOTT. Also, I would like to suggest that we develop what might be called the Greater Yellowstone Interagency Committee based on the success that we have had with the interagency committee relative to the grizzly bear and that that be established and that we proceed along those lines to resolve these problems. I have a chart recommending what that interagency agreement could be like or what that committee could look like and they could meet on a regular basis.

It seems to me that a lot of these problems would be solved by regular meeting and communicating through that kind of an organization because it has worked with the grizzly bear, but there are lots of other problems that keep coming up. I am sure they are going to continue to do that.

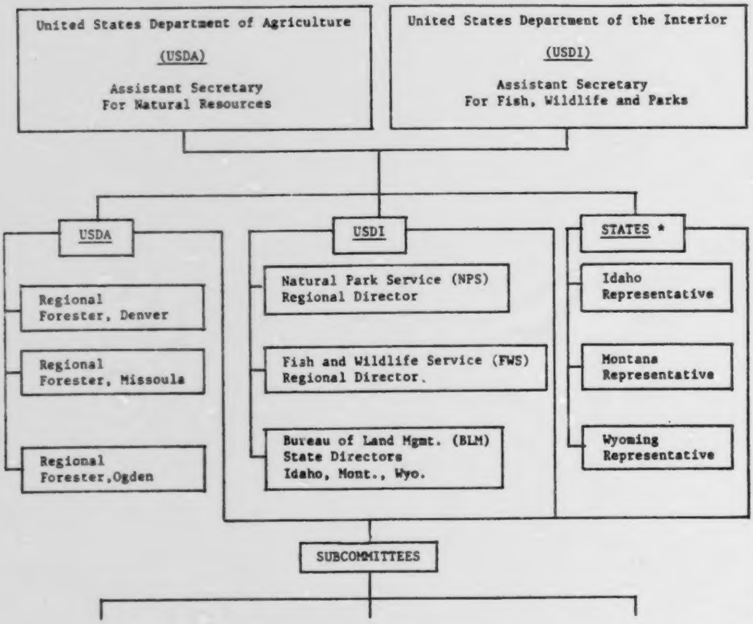
I would think some kind of organization, formal structure, would be able to handle these kinds of matters.

Mr. SEIBERLING. You are way ahead of me because I was going to ask you that very question.

Why shouldn't there be some sort of interagency coordinating committee mechanism on all issues, not just grizzly bears?

Mr. MOTT. I will be glad to provide you with a copy of this.

GREATER YELLOWSTONE INTERAGENCY COMMITTEE


United States Department of Agriculture
(USDA)
Assistant Secretary
For Natural Resources
United States Department of the Interior
(USDI)
Assistant Secretary
For Fish, Wildlife and Parks
USDA
Regional
Forester, Denver
Regional
Forester, Missoula
Regional
Forester, Ogden
USDI
Natural Park Service (NPS)
Regional Director
Fish and Wildlife Service (FWS)
Regional Director.
Bureau of Land Mgmt. (BLM)
State Directors
Idaho, Mont., Wyo.
STATES *
Idaho
Representative
Montana
Representative
Wyoming
Representative
SUBCOMMITTEES

NOTE: This chart is patterned after the Interagency Grizzy Bear Committee Organization. Subcommittees for a Greater Yellowstone Interagency Committee would be formed as appropriate.

* Includes Representation of:
State Regulatory Agencies and
State Political Subdivisions

Mr. Vento. I think that is very constructive and I think it points out—I don't know that there are legal impediments, but I think there is a concern if you enter into this you are going to subordinate whatever your charter or mandate is in terms of the Parks and Forest Service, or BLM, or Fish and Wildlife Service to some other purpose. That is to say, if the highest goal is the preservation of the natural system and the high value placed on that in terms of utilization by parks and recreation and others, I guess the question is there are times when that is going to conflict.

We talk about communication here. Mr. Barbee points out in his comment on the Forest Service plan in August 1985 that the isotopic composition of thermal waters in the park with present interpretations and data in hand, the only reasonable place for the major recharge area for the geyser basins is in the Gallatin.

Mr. Burford, you commented—not in your statement, but when you were going through it—that you had done some testing, didn't you? You had relied on testing with respect to geothermal waters and the likelihood of impacting on the geothermal leasing; is that correct?

Mr. Burford. No; I said that it was suggested that testing be done by USGS in the Island Park area by drilling some test wells there to find out if there was any connection between the geysers in Yellowstone and the Island Park area. These were not production wells; they were very small test wells to see if there was any connection.

Mr. Vento. What was the result? The result was there was no connection?

Mr. Burford. There was no result because, as Senator Melcher said, there was a rider put on the appropriations bill which said that the USGS could not spend any money on testing.

Mr. Vento. I understand the rider.

Mr. Burford. Therefore, no testing was done.

Mr. Vento. No testing was done. Is that de facto law now?

Mr. Burford. Still, yes.

Mr. Vento. It is still law. Is it de facto law?

Mr. Burford. Yes; since we are under a continuing resolution itself.

Mr. Vento. If he takes it off, are you going to do anything, resume what you were doing?

Mr. Burford. That law was not directed toward my agency. It was toward USGS.

Mr. Vento. But if he takes it off, are they going to proceed?

Mr. Burford. That is a question that could be answered only by USGS.

Mr. Vento. You can't answer that question?

Mr. Burford. No, sir.

Mr. Vento. Would you recommend they proceed?

Mr. Burford. Yes; I would recommend that they proceed and find out if there is any connection between those two aquifers.

Mr. Vento. I guess it isn't de facto law yet.

Mr. Seiberling. It was in the 1985 appropriations bill. I wonder what the status is as far as 1986? Anybody know?

Mr. Burford. I don't know what the 1986 bill says. I think it was put on the floor last time.

Mr. **Vento**. Mr. Mott.

Mr. **Mott**. Mr. Chairman and Mr. Vento, we are concerned about this matter of geothermal exploration. There are indications that if we start that sort of process we may create some serious problems and there are new technologies on this whole subject.

I would like John Varley to explain to you the new techniques so we don't start a drilling process when we have these new techniques to determine where these waters go, and how they are reacting, and so forth.

Mr. **Vento**. I think it would be good.

I think there is a basic misunderstanding what the facts are here. The Park Service is saying there is a direct connection and good information and the Director of BLM is saying he might recommend that USGS go ahead.

Mr. Varley.

Mr. **Varley**. Thank you. We have put considerable research into the matter of whether there is connection across the boundary in the last 10 years using the isotopic signature method that you referred to earlier about referencing the aquifer for the great geyser fields.

There is that data and that data is inconclusive in the case of the cross-boundary connection. However extensive seismic data that tend to map the faults that cross the boundary there and also a telluric and audio magneto-telluric methods strongly suggest that there is a cross-boundary connection.

But to be completely fair, I would say that the weight of evidence suggests that it is one hot spot and that our boundary bisects it although we freely admit that there is another body of scientific evidence that would suggest otherwise.

Mr. **Vento**. I appreciate that. I am certain we are not going to be dealing with absolutes with regard to this for a long, long time, are we?

Mr. **Varley**. No, sir.

Mr. **Vento**. If this is 60 percent of the world's geysers, it is perhaps important that we back off before we move ahead with even testing that might risk some problems. Who would deny these leases? Why, with all of this question and concern, Mr. Burford, why wouldn't you deny these types of leases?

Mr. **Marlenee**. Would the gentleman yield?

Mr. **Vento**. I would like Mr. Burford to answer this question first and then I would be happy to.

Mr. **Marlenee**. I would like a clarification.

Mr. **Vento**. Clarification of the question?

Mr. **Marlenee**. Yes; what lease are you talking about? Oil leases or geothermal?

Mr. **Vento**. Geothermal is what we are talking about.

Mr. **Marlenee**. Let's keep that clear, the distinction between oil and geothermal.

Mr. **Vento**. Fine.

Mr. Burford.

Mr. **Burford**. They have a de facto denial in that they have not been acted upon because we don't feel we have enough information. As Mr. Mott says, we have proposals.

Mr. VENTO. You have sent back communication denying the leases?

Mr. BURFORD. We have not denied the leases.

Mr. VENTO. You have not?

Mr. BURFORD. We have with held action on them and legislation providing a buffer zone, was introduced in the House and the Senate last year, practically the same legislation, but it was never acted upon.

Mr. VENTO. I don't know about that. This point gets to a real point I wanted to ask anyway. You have not denied those leases. We think you ought to.

I think you ought to deny them based on the type of commotion and the likelihood of risk to these geysers. But this gets back to a point, Mr. Burford. Do you feel you are legally constrained from denying those leases?

Mr. BURFORD. No.

Mr. VENTO. But you have the power and the flexibility so this is a policy decision you have made.

Mr. BURFORD. The Secretary can deny a lease.

Mr. VENTO. You feel you are legally constrained because the mandate of BLM in terms of the law by not denying? Is that what you are saying?

Is there a basic conflict here between the leasing responsibility that you have and the purpose for which the park was created that exists here?

Mr. BURFORD. There probably is a basic conflict there. However, we have no intention of issuing those leases until we have definite proof or unless we have definite proof there is no connection between those aquifers.

Mr. VENTO. The point is why don't you deny them at this point? You don't feel there is sufficient information or concern they should be denied?

Mr. BURFORD. Certainly there is concern. We don't feel we have sufficient information.

Mr. VENTO. Not enough. It is not sufficient concern.

Mr. Mott, I just hope this is a recognition of the type of legal mandate problems that we are going to have unless there is some coordination in terms of what the overall words are.

You can write back and forth to each other about each other's plans but I think there is a need here to recognize that we are talking about geothermal and to recognize one of the three reasons the park was created for. We have got it on hold and we are afraid to say no with regard to these leases which escapes me completely.

Mr. SEIBERLING. Mr. Marlenee.

Mr. MARLENEE. Thank you, Mr. Chairman.

I have just a few quick questions here.

Mr. Barbee and Mr. Mott, if they would receive the first question, item No. 36 in the threats list of 88 says that Gold Reef wildcat well was and is a threat to Yellowstone Park or to the ecosystem. Do you know where this is located, either one of you?

Mr. MOTT. I don't.

Mr. BARBEE. No; I don't specifically know where the well is located.

Mr. MARLENEE. You don't know where the well is located?

I might point out on the map the well is at least 60 miles, 50 to 60 miles from the boundary of the park. It is no wonder you don't know where it is.

Second, I might point out that it is somewhere between 10 and 15 miles, looking at the map, from any Forest Service boundary. Yet, it is listed as a potential threat to the ecosystem.

Let me ask this question of those at the table. Are not the logs—we are talking about an oil and gas well—the logs of every oil and gas well that are drilled in the proximity of that area, no matter that they are 50 or 60 miles away and on public land, are they not available to the Park Service and to the BLM?

Mr. BURFORD. Yes, sir.

Mr. MARLENEE. So you can examine the logs and in the examination of such logs can you not determine whether or not there was a potential for geothermal activity or cross-current of geothermal activity by scientific analysis?

Mr. BURFORD. In that oil and gas well?

Mr. MARLENEE. Yes.

Mr. BURFORD. Yes, sir.

Mr. MARLENEE. Thank you.

Mr. Barbee, threat No. 76, Stillwater mine, I am infinitely familiar with that area and with that area of the park. If you stood on the highest peak in Yellowstone Park adjacent to the area of the Absaroka/Beartooth, could you see the Stillwater Mine on a clear day at high level?

Mr. BARBEE. I don't know. Probably not.

Mr. MARLENEE. Probably not. If you were to drive from maybe Canyon, which would be the closest junction in the park, if you were to drive from Canyon to the Stillwater complex? Would you not go through Red Lodge?

You would go through the east entrance, northeast entrance, you would go through Red Lodge down the Cook City Highway through Red Lodge, through Luther, come back up. Would that drive not take you at least 8 hours leaving from Junction?

Mr. BARBEE. It would take quite a while, yes, sir.

Mr. MARLENEE. I have been late for some appointments there at the lake with you because it does take an extended amount of time. It takes from 6 to 8 hours to make that drive. So we are looking at a threat called the Stillwater mine that is on the northernmost boundary of the Bob Marshall or the Absaroka/Beartooth that it would take 6 or 8 hours to drive to from the nearest point in the park that you can't see, it would be impossible to see from within the park and yet it is listed as a potential threat to that whole ecosystem.

Threats 9, 27, 28, 40, and 65 listed in the bible; No. 9 bison management; No. 27, elk management; 28, fishing bridge; 40, grizzly bear management action; 65, poaching; 88, wolf recovery. That encompasses the sum total of the impacts that you have—threats, potential threats that you have direct control over.

Do you have the management tools within your capability to manage those perceived threats or issues?

Mr. BARBEE. With all due respect, Mr. Marlenee, we would like to point out this does not constitute a list of threats that we compiled.

Mr. Marlenee. I know that. I would make that clear for the record.

Mr. Barbee. To answer your question specifically, we certainly do have the authority to manage the resources, wildlife resources within the park.

Mr. Marlenee. Thank you.

Acid rain.

Mr. Seiberling. Would the gentleman yield?

Mr. Marlenee. I would be happy to yield.

Mr. Seiberling. I presume the other side of that statement would be but not outside the park; is that correct?

Mr. Marlenee. I am going to get to that.

Mr. Seiberling. OK.

Mr. Marlenee. Of course, they can't manage all of the public land outside of the park. That is not their directive.

Mr. Seiberling. That is the whole issue that we are dealing with.

Mr. Marlenee. Well, then the chairman is admitting that this whole hearing is about total control of issues outside of the park, on land outside of the park by the Park Service?

Mr. Seiberling. No; we are simply trying to find out what is the situation with respect to the wildlife in the park, as well as the scenic quality, the water quality and the other features of this park, and the impact on the activities outside the park.

We are trying to find out about the entire ecosystem, not just what is within the park boundaries, which are purely arbitrary.

Mr. Marlenee. Let's find out. Mr. Mott, or Mr. Barbee—Mr. Mott, has the Park Service ever been denied cooperation or consultation in dealing—I am talking about that you know of in the past 3, 4, 5 years with the agencies that manage the land outside of the park?

Mr. Mott. I think at the field level there has been good understanding between the superintendents and our people relative to the management of the areas outside of the park and there has been good cooperation and understanding that activities outside the park may have have affected the environment inside the park and that care should be taken to prevent that from happening.

We are recommending this organization structure in order to carry this out on a formal basis and at the level of the Assistant Secretary.

Mr. Marlenee. As a matter of fact, don't you receive criticism, Mr. Barbee, from the fact that the communication is more one way outgoing than it is two ways in coming, and I refer to the situation with the bison management and the people being quite upset in the State of Montana over bison from the park going into Montana. Wasn't there some conflict there?

Mr. Barbee. There is conflict there, but I believe we are working with the State of Montana to resolve that. We have a boundary control initiative that is currently underway. We are entering into an experimental vaccination effort with Dr. Tom Thorn who is the research veterinarian for the State of Wyoming.

Mr. Marlenee. You have had a direct communication. They are asking you to cooperate with them which you assert you are and that is not the issue here, but the communication and the cooperation has worked, is working.

Mr. VENTO. Would the gentleman yield?

Mr. BARBEE. I believe so. I must say that we don't view this initiative as a park protection initiative, that is what we are talking about here today, this Greater Yellowstone concern. We look at it as a collective vision that the managers of the various agencies within the Greater Yellowstone have to work toward to protect the integrity of the entire system.

We are not looking at this as some sort of bunker mentality for the protection of Yellowstone National Park.

Mr. MARLENEE. Let me ask you this final question and then I will yield after this question.

It is not quite the final one, but I will yield. Have you ever been denied communication and cooperation with the U.S. Fish and Wildlife Service, with the Forest Service, with the BLM—for that matter there is very little BLM and surrounding the park—or with the State of Montana?

Mr. BARBEE. Never.

Mr. VENTO. Would the gentleman yield?

In your resource management plan on page 13, it specifically cites a problem, the lack of sufficient coordination with the Forest Service dealing with the wildlife fire program, in an area adjoining the park. The gentleman from Montana was asking the question if there has been problems denied, I don't think he means catch us if you can. How do you reconcile that?

Mr. BARBEE. There is a great deal of activity going on in and around Yellowstone National Park. It is an immense area and there are any number of management initiatives carried on in the national forest and so on.

Mr. VENTO. I guess there are problems that occur. I hope you can resolve them and I am not trying to get you to point fingers at one another. I suspect they can point some fingers at the Park Service, too. I just want to establish for the record, although we want to treat all of our agencies good and not cast any aspersions on them, that the record indicates that there has not been all this harmonious relationship.

I thank the gentleman for yielding.

Mr. MARLENEE. The final question would be addressed to either Superintendent Barbee or Director of the Park Service, Mr. Mott. My question is with regard to acid rain, which is listed as No. 1 on the perceived threats, do you have a great deal and do not geysers, and the hot spots and hotsprings emit sulfur dioxide there in the park?

Mr. MOTT. Yes. There is a definite smell of sulfur dioxide in that area.

Mr. MARLENEE. That in itself contributes to acid rain, does it not?

Mr. MOTT. Yes.

Mr. MARLENEE. That is one of the complaints we hear.

Mr. MOTT. I think acid rain is a much more serious problem than the sulfur dioxide coming out of the geysers.

Mr. MARLENEE. No doubt we should be concerned about acid rain as a nation and should take every perceivable step to mitigate that. There are some conflicts as to how we should do that, but if you were to stop every activity, manmade activity that was occurring outside of the park on the public lands, would that precipitately have an impact or change the acid rain within the park?

Mr. Mott. I think the acid rain is a much broader and bigger problem than the environment around Yellowstone National Park. I don't think it would make much difference. This is a national problem. We are doing a tremendous amount of research on that in the National Park Service and I think in time we will have some very strong recommendations relative to this.

It is going to be expensive to solve that problem but it has got to be solved. It is not just confined to Yellowstone National Park.

Mr. Marlenee. Thank you. We have taken care of about 60 of the perceived threats.

Mr. Seiberling. We have it on good authority that trees are the greatest source of air pollution but I won't go into that.

Mr. Darden.

Mr. Darden. I have no questions except to say to the distinguished panel I appreciate your appearance here today and the information you provided to us. I am certainly looking forward to visit, along with my family, Yellowstone National Park next summer.

Mr. Seiberling. Mr. Udall, would you like to have your time?

The Chairman. No.

Mr. Darden. I yield back my time to the chairman for whatever purpose he sees fit to do with it.

Mr. Seiberling. Mr. Cheney.

Mr. Cheney. Thank you, Mr. Chairman. I want to welcome the panel here this morning. My experience in working with them has been excellent. They are professional land managers of the first order. It has always been a pleasure to work with them. Mr. Marlenee has done a good job of targeting in on the nature of threats to Yellowstone.

It seems to me those who argue that the current management is inadequate, or that it needs somehow to be fundamentally changed, have to make a case that existing authorities or management practices are somehow inadequate and the park is somehow endangered in some respect.

I would like to just followup in that vein similar to the question Mr. Marlenee mentioned. I know also on the threat list that was prepared by the coalition, No. 36, mentions an oil well 30 miles south of Meeteetse, and No. 12 was a well some 8 miles south of Bondurant.

Both of those areas I think most of us from Wyoming would say are a long way from Yellowstone. To get to Meeteetse from the east end of Yellowstone is at least a 2-hour drive. If you go south from Jackson Hole to get to Bondurant it is clear up on the pass as you go over the headwaters of the Hoback down into the Sublette County side.

That raises a question whether or not there is any kind of consensus in your mind as to exactly what we mean when we say the Greater Yellowstone ecosystem, how big an area are we talking about, what is it reasonable to look at in terms of your coordinated management proposal that you mentioned, and in your mind what is the Greater Yellowstone ecosystem? Can you describe it? Do we have a map of it? Can we specify how big an area it is?

Mr. Mott. The coalition has indicated what they consider to be the environmental area that would have detrimental effects if threats were carried out in that area or developed in that area. Actually it is not an ecosystem in the true sense of the word and we have to assume that that area is a general area we ought to be concerned about.

Mr. Cheney. But there are no specific boundaries in your minds?

Mr. Mott. No; most of the area, as you know, in the National Park is surrounded by national forest land and generally we are talking about those areas.

Mr. Cheney. Mr. Barbee, do you want to elaborate on that at all? You are the man on the spot.

Mr. Barbee. Certainly I would concur with my boss here. I think we view the Greater Yellowstone ecosystem as a composite of lots of resources—the mountain ranges, the great wildlife ranges, the thermal areas and so on. I think those of us who are managing the lands up there, as I mentioned a moment ago, are at the moment groping with this notion, this concept, and we are trying to work toward some meaningful expression to insure the integrity of the entire ecosystem, and it is always disturbing to us in the field to hear the rhetoric which seems to be directing us toward some sort of park protection notion, that this whole idea and everything everybody is talking about is somehow devised to protect Yellowstone National Park which isn't the case.

We are trying to take a collective view of the entire resource area there which has been identified as the Greater Yellowstone Ecosystem. We don't have a boundary line that we have all agreed to and probably a specific boundary in its placement would be arguable in the matter—who has actually put it on the map.

Mr. Cheney. You can understand, I can, the difficulty we face when we try to evaluate this question of whether or not there are threats there. I looked down the list of 88 proposed threats and some of them may or may not fall within some ill-defined area that we haven't agreed upon or can't be specific about. It obviously raises serious questions, I think, from the standpoint of trying to coordinate land managment. Mr. Seiberling raised the question about oil and gas wells.

I think the record ought to show as a general proposition there has not been that much oil and gas activity in the Yellowstone National Park area.

I would read into the record at this point from a paper prepared by the Library of Congress dated October 21, 1985, Susan Abbasi, this was prepared at the chairman's request.

"Oil and gas exploration in the Greater Yellowstone Ecosystem has been rather limited. The Bighorn Basin has some development, but is generally located east of the area, toward the Bighorn Mountains. The Overthrust Belt, which has been the focus of much exploration activity, skirts Yellowstone on the west and is generally outside the ecosystem. There is active drilling in two areas bordering the ecosystem: in the Targhee National Forest in Idaho, southwest of Jackson, Wyoming, and in the area of Dubois, Wyoming, between the Shoshone National Forest and the Wind River Indian Reservation.

"There has been little or no oil and gas development in the ecosystem, although substantial acreage has been leased and might be developed in the future," in accordance with existing Federal law.

[EDITOR'S NOTE.—The above-mentioned report may be found in the appendix. See table of contents for page number.]

Mr. CHENEY. Our experience has been recently when we had significant controversy with respect to oil and gas development on the north shore of Shoshone River on the east side of Yellowstone National Park, admittedly a sensitive area.

It is on national forest land near wilderness, near the park itself but in the end when the permits to drill were issued, of course, there were stipulations attached.

All of the activity took place by helicopter. There were no roads built into the area. Marathon undertook the activty and I think did a tremendous job of managing their activities in the area consistent with what Federal law allows in a way that created no problem whatsoever.

Seismic work that has taken place in the area has been scheduled at times so that it doesn't conflict with the sheep migrations or the elk use of the habitat. So I think for those of us who live in the area or represent people who live in the area our general impression is that in fact the land managers have come a long way interms of sensitivity about those kinds of activities that might conceivably conflict with our desire to preserve and protect the Greater National Park Ecosystem.

I wonder, Mr. Mott, if in your opinion Yellowstone is the most threatened national park that you are responsible for?

Mr. MOTT. I think this question of working together in cooperation to solve these problems is an evolving matter. I think we are learning from research a great deal more. We have a great deal more knowledge now than we had previously. I think all of us who are involved in this question of managing the public domain are sensitive to our responsibilities to do the job effectively and efficiently and do it well based on sound and continuing research.

I think it is very important that this committee recognizes that we need continuing, regular research in order to resolve these problems and I think we can resolve them creatively among ourselves because we understand the problems and I think we can do a better job than we have ever done before because of good research.

We need the funds to do that work and I think it has to be understood that research is the key to solving these problems and making good judgment decisions.

With regard to threats, I think that probably some of our major areas are more concerned about the intensive use of those areas. We are looking at that problem, as you know, to determine how we can best handle the situation by disbursing people because people and automobiles become a very serious problem in many of our areas such as Yosemite Valley and some of the other areas we have to administer.

Mr. CHENEY. It would be my feeling and I can't claim to be an expert in Yosemite but Yosemite is far more endangered at this point if you will as an ecosystem or as a park than, say, Yellowstone. Would that be a fair judgment? More people, more threats, more pollution problems.

Mr. Mott. I would say the valley in Yosemite probably is more threatened because of the intensive use there. I suspect that the problem of flights in the Grand Canyon are creating serious problems for us that we must resolve. Those are specific areas we are having problems with and we intend to accept that responsibility of solving those problems and doing it creatively.

Mr. Cheney. I guess we will come back to the notion that some of us have that Yellowstone is in fact in the excellent condition it is in, the world's finest or the Northern Hemisphere or temperate zone's finest intact ecosystem in the world; that maybe what the committee ought to be looking at is not threats to Yellowstone, but threats to the other national parks if we are going to pursue ecosystem legislation or some kind of management concept, that maybe what we really ought to look at is San Francisco Bay, the Chesapeake, Cuyahoga River, the Great Lakes ecosystem. I think there are a lot of areas that probably merit the attention of this committee more, in terms of threats and hazards to the fundamental purpose for which these parks were created, then the Yellowstone system, and with that, I yield back my time.

Mr. Seiberling. Would the gentleman yield?

Mr. Cheney. I will be happy to.

Mr. Seiberling. I think we ought to agree with the whole thing. When we started out with the National Park Protection Act we tried to get a system of all of the various agencies to coordinate with the Park Service where there were possible threats to parks. Everybody objected to that—not everybody but some people objected to it and said we ought to do this on a case-by-case basis. So that is what we are doing.

We have to start somewhere and there has been an awful lot written and talk in recent years about the Yellowstone Park, the grizzly bear, and so forth, so it seemed like this was a good place to start.

I am all in favor of looking at some of these other areas. As a matter of fact, the EPA is now trying to find out what the quality is of the water in the Cuyahoga River, and why the fish in the Cuyahoga River north of Akron are all dying. I want to know the answer too. Because the Federal and State and local governments are spending hundreds of millions of dollars to protect water quality in our rivers, including that one, and I do want to know where water isn't being protected. I go along with you on that.

Mr. Cheney. I share the chairman's concern and I can vouch from personal experience because I spent 2 weeks in Yellowstone in August that the cutthroat in the Yellowstone system are in perfect condition.

Mr. Seiberling. Iam delighted to hear that. Let me simply say that with respect to oil and gas exploration, that Ms. Abbasi's CRS report does indicate little development. But what we are concerned about is not what is going on right now but what has already been leased and what might be done in the future.

It seems to me that to highlight this issue is important with respect to future policies that BLM and all the other agencies follow, as a way of sensitizing them to the impact of their decisions on the ecology of Yellowstone Park. That is all we are trying to learn here.

Well, Mr. Weaver.

Mr. **Weaver**. Thank you, Mr. Chairman. I say to my good friend from Wyoming that with regard to the areas he mentioned, the threats have already been carried out. We are just trying to make sure that the threats aren't caried out on Yellowstone. Once they have been carried out it is too late and now is the time to protect a place like Yellowstone. I have here a paper that has no name on it. It says:

> Comments on proposed forest planning out in Gallatin National Forest by Yellowstone National Park, August 1985.
>
> The greatest challenge now facing land management is integrating a variety of private interest mandates and public needs that will maintain the integrity of the largest intact natural ecosystem in the temperate zone of the earth.

It goes on to say:

> It is well known, for example, that external actions beyond the administrative control of the National Park Service could impair our ability to protect the grizzly bear, maintain a healthy elk population or perpetuate naturally occurring levels of geothermal activities in the park.

Mr. Mott, or Mr. Barbee, do you know from whence this paper flows?

Mr. **Barbee**. Yes, sir, I believe you are reading sort of an introduction to the comments that National Park Service made on the forest plan for the Galatin National Forest.

Mr. **Weaver**. Is this an official NPS paper?

Mr. **Barbee**. Yes, sir.

Mr. **Weaver**. I see. Then perhaps, Mr. Barbee, you can comment on it. On page 2, it says "we are compelled by our concern for the long-term fate of this area, Yellowstone, however to ask the hard question. Are the immediate gains made by relative few people near the park worth the losses the world will feel if America loses the grizzly in Yellowstone, or permits the Park geysers to suffer some irreparable harm?"

You go on to say that for that reason, we heartily recommend that the Gallatin National Forest plan be modified to give greater emphasis to protecting the ecological values that have made this area so justly famous.

Could you tell me, Mr. Barbee, what recommendations are made in this paper or from any other source, to modify of the Gallatin National Forest plan?

Mr. **Barbee**. Those comments were made in the spirit of genuine concern for the park and its resources and at the same time I believe the comments were made as an appeal to our colleagues in the Forest Service to join together with us to protect not only the resources in Yellowstone but also, of course, the integrity of the entire ecosystem.

Now, as far as any specific comment that I would make regarding the details of that plan, I cannot relate to that unless we know what they are per se.

Mr. **Weaver**. I am asking what does this paper say?

Mr. **Barbee**. Sir?

Mr. **Weaver**. What modifications does this paper suggest in the land management plan of the Gallatin National Forest?

Mr. **Barbee**. I don't have the information with me.

Mr. **Weaver**. Page 3, we do not think present levels of human use are in all cases compatible with grizzly bear recovery.

Mr. **Barbee**. I believe the comments made in the preamble to our comments on the Gallatin plan were general expressions of concern that we want our neighbors to be mindful of and they were made in that spirit.

Mr. **Weaver**. I am sure that you want to maintain good relations with the managers of the Gallatin National Forest. I don't know why I have so much trouble pronouncing the name of the second Secretary of the Treasury.

But would you go on to tell us what you said in here?

Mr. Chairman, if I may, I ask unanimous consent that the paper from the National Park Service outlining the various concerns with the management of the Gallatin National Forest affecting the ecosystem of the national park, Yellowstone Park, be placed in the record at this point.

Mr. **Seiberling**. Without objection, it will be included at this point.

[Editor's note.—At time of printing, the Department had not yet supplied the information requested by Chairman Seiberling. When received, that material will be placed in the committee files of today's hearing.]

Mr. **Weaver**. You had concerns about the logging operations in the plan, the commercial timber harvest areas which affect the grizzly bears, Mr. Barbee?

Mr. **Barbee**. We expressed our concerns and our comments which again is part of the process. We are commenting on all the forest plans that surround Yellowstone and it is indicative of the continuing dialog we have with the Forest Service.

Mr. **Weaver**. This paper shows a considerable amount of concern for those plans affecting the grizzlies and other parts of the ecosystem of the Yellowstone, does it not?

Mr. **Barbee**. They are substantive comments, yes, sir.

Mr. **Weaver**. And that ecosystem that you are concerned about, that goes considerably beyond the boundaries of the Yellowstone, does it not?

Mr. **Marlenee**. Will the gentleman yield?

Mr. **Weaver**. No; not at this moment, but I will in a second.

Yes, Mr. Barbee.

Mr. **Barbee**. We have two thrusts, I believe I could say. One, when we are commenting on forest plans in regard to the Yellowstone they are made with that intent. When we are discussing our collective action toward protecting the integrity of the ecosystem, I think it is in a different vein.

The comments that we made on the Gallatin Forest plan as well as the forest plans of those under way surrounding Yellowstone were made specifically as they relate to the park.

Mr. **Weaver**. Well, what you are saying in here is that the national forests around Yellowstone are part of the general ecosystem of the area, and that those forests are affecting the grizzly bear population.

I am going to yield to my friend from Montana, but I am afraid, Mr. Barbee, you didn't really answer my question on it. I don't mean to press you too hard. But on the logging operations in the Gallatin National Forest, you didn't answer that. Are they affecting the grizzly bears as now enunciated in that land management plan? Are they going to have potential to affect the grizzly population of the area?

Mr. **BARBEE**. We believe they possibly could. That is what we surfaced in these comments.

Mr. **WEAVER**. The gentleman from Montana is my guest at this moment.

Mr. **MARLENEE**. I thank my colleague from the State of Oregon.

Mr. **WEAVER**. Take your time.

Mr. **MARLENEE**. Mr. Barbee, in making your comments, sir, and in the comments that took place, didn't you in fact have a great deal of evaluation and consultation with the U.S. Fish and Wildlife Service?

Mr. **BARBEE**. Mr. Marlenee, this was with the U.S. Forest Service. In regard to our comments on the forest plans, no, we have not entered into another consultation with Fish and Wildlife Service.

Mr. **MARLENEE**. Thank you. I thank the gentleman for yielding.

Mr. **WEAVER**. My pleasure.

There is another letter I have here, Mr. Barbee, with the U.S. Department of the Interior, National Park Service, re: Yellowstone, receipt dated April 4, 1985, the end paper having your signature, Mr. Barbee.

I ask unanimous consent it be placed in the record at this point, Mr. Chairman.

Mr. **SEIBERLING**. Without objection.

[**EDITOR'S NOTE**.—The above-mentioned letter may be found in the appendix. See table of contents for page number.]

Mr. **WEAVER**. In this document Mr. Barbee, you discuss the Island Park geothermal areas. The letter is addressed to Dear Friends of Yellowstone. On the 7th page of the letter, it says the Melcher amendment does not relieve the pressure on Island Park. Geothermal leasing has already occurred on over 24,000 acres of private and State lands, and other Federal lands in the boundary within the IPGA which is the—are still open to lease application.

Now, you imply that these leases—even though they have not been developed—are threats to the park ecosystem, is that correct, Mr. Barbee?

Mr. **BARBEE**. We were concerned that in addition to the protection offered by the Melcher amendment there is considerable amount of State and private lands that are within that known geothermal area. I believe that is the concern we were trying to express. Yes, sir.

Mr. **WEAVER**. Very good. Now, regarding oil and gas leasing it says more than 30,000 acres of Federal land in the Gallatin National Forest are under lease for oil and gas along the park boundary near west Yellowstone. Even larger areas are under lease application in the Targhee National Forest, and leases issued during the past 4 years lie on the park boundary and contain no stipulations protecting resources in Yellowstone National Park.

Now, true, I guess these leases have not been developed but what else is the lease for but eventually to be developed.

Also, it constitutes a threat to the ecosystem of the park, is that correct. Mr. Barbee? Is that what you imply in this letter?

Mr. **Barbee**. Certainly it is, yes, Mr. Weaver.

Mr. **Weaver**. Thank you very much, Mr. Barbee. We thank you for your comments. Thank you.

Mr. **Seiberling**. Thank you.

Mr. Lagomarsino.

Mr. **Lagomarsino**. Thank you, Mr. Chairman.

I want to welcome the witnesses today, especially Director Mott. I had the privilege of serving with Director Mott when he was the director of the State park system in California and I was in the State Senate. It appears to me that the interagency coordination on problems like the grizzly bear and bald eagle recovery adequately demonstrate that the current management system can be effective. While there is always room for improvement, and I think Director Mott has outlined one possibility for improvement, and more effective coordination. If that is what is needed, it can be accomplished without new authority or more legislation.

What I would like to ask you, Mr. Mott, is No. one, how would you describe the relationship within the Department of the Interior and its various agencies on this particular subject, the Yellowstone situation? You described that the relationship on the ground in the area was good. How is it in the building itself at the higher levels.

Mr. **Mott**. I think that the Secretary is very much interested in this interrelationship and coordination as well as the Assistant Secretary and we have had very good relationships in this regard. Within the Interior Department we have a committee that is working on this program of resolving conflicts before they become critical, and I think that it is working very well.

Mr. **Lagomarsino**. How about with relationship to agencies other than Department of the Interior agencies at the higher levels?

Mr. **Mott**. Well, I cannot answer that question, but I believe the Secretary is in communication with the Secretary of Agriculture with regards to a better working relationship between the two agencies. I know that that is true at my level in connection with the Forest Service.

We have good communication and good relationships.

Mr. **Lagomarsino**. With regard to Yellowstone specifically, are there any potential, I will use the word threats—you could use others I guess—that cannot be addressed through the existing planning mechanism that is available to you and to the Forest Service, BLM and Fish and Wildlife?

Mr. **Mott**. I think that these matters can be resolved by the agencies working together. I think that it is terribly important as Iindicated before, that funds for research be made available so that we can do the necessary research to make the proper judgment decisions.

That is the important element that I think we need to concentrate on.

Mr. **Lagomarsino**. What sort of contact have you and/or Mr. Barbee had with the Yellowstone Coalition and their threats list?

Mr. **Mott**. I have just seen the threats list just recently, and I am not aware of when this was published or on what basis. Obviously there are perceived by them certain areas that may develop into conditions that would be difficult to handle in maintaining the integrity of Yellowstone National Park. I think that we need to be aware of these things but I think that we can handle these matters if we have the necessary research to make judgment decisions that are sound and backed up by good research.

Mr. Lagomarsino. How about you, Mr. Barbee, how would you answer that question?

Mr. Barbee. Locally we maintain a continuing dialog with all the constituency groups, including the Yellowstone Coalition. I know we did not participate in any material way in the development of these threats. We were queried as to what we viewed were areas of concern.

Mr. Lagomarsino. OK.

Mr. Barbee. That was the extent of our involvement.

Mr. Lagomarsino. Mr. Lambertson, going the other way, we hear a lot about the threat of the spread of the disease called brucellosis from elk and bison to domestic livestock. Do you think this is a real problem and if so, how can it be solved?

Mr. Lambertson. Mr. Lagomarsino, it definitely has a potential to become a problem. I don't know if you were here when Mr. Barbee explained that the Park Service and the Fish and Wildlife Service are working with the State to come up with different ways of controlling this through innoculation and other things. So it has the potential, it has not been demonstrated but it is something we are concerned about.

Mr. Lagomarsino. There is ongoing research and activity on that?

Mr. Lambertson. Yes, sir, there is.

Mr. Lagomarsino. As a general statement I have heard it said not by everybody, that the wildlife in Yellowstone is thriving. Would you agree with that and how would you characterize or predict what will happen in the future with respect to the livestock population?

Mr. Lambertson. The Fish and Wildlife Service responsibility is directed to threatened and endangered species. I have a personal interest. Having worked as a student biologist there, I know something about the wildlife there. It is a unique situation, I will say that. As far as thriving, I think there are historic balances that are missing there. The fact is that the predatory-prey relationship has been disrupted resulting in overpopulation of elk and other species.

There are a lot of wildlife there and to some extent, those wildlife can become problems because of the overpopulation.

Mr. Lagomarsino. I yield back the balance of my time.

Mr. Seiberling. Thank you.

Mr. Craig.

Mr. Craig. Thank you, Mr. Chairman.

I would like to extend certainly as a member of the committee my thanks for all of you gentlemen being here today to give your testimony and to attempt to determine a broader understanding of this issue as we pursue it here in the committee.

I only have a couple brief questions, questions that concern me as relates to definition of what is an ecosystem and what is a greater ecosystem and in fact, are we talking ecosystems here or composites of, and can we develop the kind of relationship that some would aspire to on this issue.

Mr. Barbee, in the geyser basin, geologically what is the basin in the Yellowstone?

Mr. BARBEE. It is not a single resource, but there are a number of areas that have thermal activity, approximately 10,000 features exist in Yellowstone. They are concentrated on——

Mr. CRAIG. Geologically speaking what is the geyser basin?

Mr. BARBEE. It is a geothermal phenomenon, it is hot water being driven through the system.

Mr. CRAIG. It is calderas, isn't it?

Mr. BARBEE. Caldera is a——

Mr. CRAIG. In the greater basin sense, it is a caldera, is it not?

Mr. BARBEE. Iam not a geologist, but the caldera is at least an artifact of extreme activity.

Mr. CRAIG. It is a blown off top of a volcano, is it not?

Mr. BARBEE. As I say, it is an artifact of an incredibly large explosive activity that took place about 600,000 years ago, and that is the Yellowstone caldera, that is the feature left over, the hole so to speak.

Mr. CRAIG. It appears that the extension of that geological phenomena and the geology of that area moves toward the State of Idaho and into Idaho and therefore the concerns expressed by the coalition and also by the park and others as relates to geothermal drilling in Idaho is an offshoot of that geologic phenomena, is it not correct?

Mr. BARBEE. Yes.

Mr. CRAIG. We recently had an earthquake in Idaho, 2 years ago and at that time geologists were willing to make the statement that the extension of the Yellowstone geothermal system was not just inside Franklin County in Idaho, adjacent to the border, but may well extend 300 or 400 hundred miles through Franklin, Clark and Custer County in a sweeping fault line that could be directly identified with the geothermal phenomena of Yellowstone.

Did you make note of that at the time or did the Park Service in their concern for the geyser basin, the caldera, integrity of the area, recognize that?

Mr. BARBEE. I don't believe that our concern was that extensive as you have described.

Mr. CRAIG. It is with some geologists. The reason I use that as an example is because I have a very difficult time understanding what is an ecosystem. There are ecosystems for plants and animals and water and in this case, I suspect we could stretch the definition of the geothermal geological ecosystem of the geyser basin to go into Custer County in Idaho some 600 or 500 miles, maybe, away from the geyser basin itself because of the uniqueness of that particular geologic phenomena.

Mr. BARBEE. Could be.

Mr. CRAIG. There are geologists who now believe that.

Mr. BARBEE. I was unaware of that particular set of data. I am not familiar with it. Perhaps our chief scientist is.

Mr. VARLEY. I believe that the present scientific thinking that talks about the geothermal area that now exists in Yellowstone is related to what they call the Yellowstone hotspot, which is a magnetic intrusion up from the center of the Earth. And what is happening there is that the North American plate is passing over the top of that particular hotspot and so the hotspot itself is moving in a northeasterly direction, and has been for some hundreds of thousands and millions of years.

So Yellowstone and its geothermal areas at one time occurred in Idaho all through southern Idaho and even in southern Oregon and it is just because of that plate moving—it is heading in a northeasterly manner.

As far as the earthquake, the Mount Borra earthquake I believe you refer to, the only effect that we saw in Yellowstone Park proper, we certainly got the seismic wave through there, and it interferred with the play of a number of geysers, but we are unaware of any geologic thinking that is attempting to expand the geothermal area over to Mount Borra or anything.

I am not aware of it.

Mr. Craig. I am not saying they are attempting to expand it, I am saying they are now saying that that is an integral part of that entire pattern if you will. I guess the bottom line question is and that is what led me to this kind of a discourse with you gentlemen, what is an ecosystem? Mr. Barbee, would you give me your definition of an ecosystem.

Mr. Barbee. Well, sir, the term ecosystem was coined in the mid-1930s and it was a very technical ecological term, very narrowly applied in scientific circles and evolved over the years. A number of scientists working in the field of ecology elaborated the term and in the early 1970's it hit the popular scene and it has become a buzzword.

Frankly as our director suggested, it causes us concern, the use of the terminology ecosystem.

Basically in our view, an ecosystem is a concept applied to the land and in the case of the greater Yellowstone that land is represented by a fairly contiguous intact area represented primarily as a core in Yellowstone National Park, and in the wilderness areas of the national forests that surround it and some other isolated land here and there.

So an ecosystem in our view isn't something you can define definitely, at least as a practical or pragmatic management tool, but it is a term that we are having to deal with. I don't think it is going to go away. So——

Mr. Craig. Is it possible to say, that an ecosystem is in the eye of the beholder? His or her interpretation of it?

Mr. Barbee. I would in a sense agree with that .

Mr. Craig. Mr. Mott, would you agree with that?

Mr. Mott. Technically, it seems to me we have to recognize that in applying the word "ecosystem" it should be applied to a specific subject. We know what the ecosystem is of the grizzly, for example. We can define that. But when we use it as a general term as I indicated, we are using it incorrectly scientifically. We should be calling it a biogeographical——

Mr. Craig. But that may not get people's emotions flying.

Mr. Mott. That is right.

Mr. CRAIG. If you get too scientifically technical, but you are right, it isn't the buzzword so it doesn't engender the emotion that an endangered ecosystem does, is that correct?

Mr. MOTT. That is probably correct.

Mr. CRAIG. How would you define ecosystem, Mr. Burford?

Mr. BURFORD. I looked it up.

Mr. CRAIG. What did it tell you?

Mr. BURFORD. The dictionary says, "An ecosystem is a complex community and its environment functioning as an ecological unit in nature."

Mr. CRAIG. Wow.

Mr. BURFORD. You can sit down the way I sat down yesterday and try to figure out how to put a boundary on that and I came to the ultimate conclusion that probably the only true ecosystem that we know of is the Earth as a whole because if you start at the north end of the unit that we are talking about, you will find a plant structure and geological structure up there, entirely different from what you will find if you get down toward Metitse, both geologically and in plants and in animals. I don't think it is possible to draw a line around an ecosystem and say this is an ecosystem.

I brought an exception to Mr. Peterson's attention yesterday and I thought that possibly the proposed Tall Grass Prairie Park in Kansas might be considered an ecosystem because it is practically all the same. The plants in it are the same—the elevation, the geological formations are all the same.

He corrected me. I cannot remember exactly how he corrected me now, but it, too, did not prove to be an ecosystem.

Mr. CRAIG. I think he said it wasn't eco-type.

Mr. BURFORD. Yes, right.

Mr. CRAIG. That was the correction he made.

Mr. BURFORD. So I think it is a very difficult thing to define and I would say it is practically impossible to draw a line around it.

Mr. CRAIG. Thank you, gentlemen, very much.

Mr. Chairman, I will conclude and if there is any time, I would yield back. My only concern is reflected probably in the concern of the sheep raiser in DuBois County who finds his baby lambs in the center of a dissident grizzly from Yellowstone's Ecosystem. That is a problem and it is part of the problem that we attempt to deal with, and what do you do when you have those kinds of difficulties resulting? I am not sure we know how to do it. I do believe that interagency effort and cooperation to solve those problems and understand them is very, very desirable for the area.

But it is extremely difficult for a sheep grower in DuBois County to have a grizzly who is protected because he is in the Greater Yellowstone Ecosystem, find his livelihood part of that particular grizzly's appetite. I guess he is just unfortunate that he falls in the Greater Yellowstone Ecosystem.

Mr. SEIBERLING. Well, I——

Mr. CRAIG. Thank you, Mr. Chairman.

Mr. SEIBERLING. Thank you.

I would just like to say, is there an exception to the Endangered Species Act under which a grizzly that persists in going outside of the normal habitat that we are trying to keep him in, is no longer protected?

Mr. Craig. I don't think we have taught them to read.

Mr. Seiberling. Is there?

Mr. Craig. In the case of some of our farmers and ranchers, there are exceptions and they usually use the 30/06. That makes the exception to the case.

Mr. Seiberling. I wonder if there is a legal exception.

Mr. Vento. If the gentleman will yield.

Mr. Craig. If you have a grizzly or any predator animal——

Mr. Seiberling. A rogue bear.

Mr. Craig. But how does one define rogue.

Mr. Vento. If the gentleman will yield, isn't that what this exercise is all about in terms of if you continue to basically upset the natural habitat of a bear you will have more and more conflicts, whether it is within the park or without the park?

Mr. Craig. I think the difference, Congressman Vento, is that the sheep rancher who has been there for 100 years and is attempting to cope and all of a sudden, the rules changed and now the predator has the upper hand instead of some balance.

Mr. Vento. I think the conflicts will intensify if you continue to do other things, not necessarily the activity that has been there for 100 years, but those which have not been there, for example, the leasing, and oil and gas, and continued timber cutting and all the things that are occurring now, and I think the question is to avoid the conflicts with those activities that have been going on for hundreds of years, or even the last three decades, but you will have those conflicts.

The result has been the last 5 years that the population of bear have gone from 350 down to 200.

Mr. Cheney. If the gentleman will yield on that point.

Mr. Vento. I think Mr. Craig has the time.

Mr. Craig. I will be happy to yield.

Mr. Cheney. We didn't get into the bear question much today, and given the number of witnesses we have I am not sure we should. I don't think the record should show, however, that there was a net reduction in the bear population in the last 5 years from 350 to 200. Correct me if I am wrong, Mr. Barbee, there has been a big debate over how many bears we have and whether the population is in decline or not.

The estimates have changed from time to time and there was a significant reduction in the bear population, partly through conscious decisions and policies set by the Park Service back in the 1970's.

But I don't think it would be fair to say there has been approximately a 50-percent reduction in the number of bears in the last 5 years.

Mr. Vento. That information is contained in a report from the Interagency Task Force that that was dealing with. That is what their report indicates.

Mr. Cheney. To be precise, there was a significant reduction in the bear population in the 1970s, partly brought about by destruction of bears by Park Service personnel as a conscious policy. To get into a situation that will make the statement and leave the impression that the bear is in decline in Yellowstone, I don't think would be an accurate statement.

Mr. VENTO. We have testimony here from——

Mr. CHENEY. I think the record ought to show there are bear experts who believe in fact there has been the beginnings of recovery in the bear population and we have made major progress.

Mr. VENTO. I look forward to hearing that testimony.

Mr. CHENEY. I wouldn't want the gentleman to be under the mistaken impression that somehow all the efforts of a great many professionals in recent years have gone for naught in terms of bear populations.

Mr. VENTO. I would hope not.

Mr. SEIBERLING. The buzzers remind us that we don't have unlimited time. I guess somebody might characterize the Congress of the United States as an "egosystem."

Mr. CRAIG. Mr. Chairman—operating within an ecosystem?

Mr. SEIBERLING. We have rules that mitigate the effects that might otherwise lead to that conclusion, and I assume that man' sactivities in circumscribing the areas beyond which bear, elk, and other wildlife may not go, in itself defines the ecosystem for those purposes.

Am I correct in that general observation? Does anybody want to pass judgment on that? I don't mind if you disagree with it.

But in any event——

Mr. CRAIG. Mr. Chairman.

Mr. SEIBERLING. Yes.

Mr. CRAIG. If you would yield for just one point.

I think the thing we find that is so unique in trying to deal with mother nature and second guess her and we do that pretty well most of the time, is how you then define an area and say this is a general operating area of a given species of wildlife.

Mr. SEIBERLING. Let me just recover my time——

Mr. CRAIG. Interestingly in Idaho this year, elk are appearing in areas they have not been seen in 100 years before. The reason is somehow their inner system signals something going on in the weather that sends them way out of their normal boundaries that would be called quote, their "ecosystem".

Now, nobody knows why but they are being sighted as far as 200 miles beyond where they are normally seen.

Mr. SEIBERLING. Let me just say, I think we are getting involved in semantics here. I don't think the issue is what is the ecosystem and therefore, how do we protect it.

I think the real issue is that we have a unique collection of wildlife and other natural features here in Yellowstone Park and we need to determine how to ensure its viability. Isn't that the issue, Mr. Mott?

Mr. MOTT. I think that is absolutely correct, and I think the issue is can the various land management agencies working together solve these problems creatively. Now, I think that is a very important area that we have to put our minds to and I think that we can accomplish that and with the support of your committee and of Congress in this direction, I think we will get on with that program by doing the kind of research that is necessary in order to come up with the right decisions.

Mr. SEIBERLING. Thank you.

We have had a lot of references to a threat book which is an unofficial book put together by the Greater Yellowstone Coalition.

There is another book which I think a lot of us have seen. It is called "Greater Yellowstone," and was published by Montana Magazine. They have a whole chapter entitled "Threats to Yellowstone". I could go through and read a lot of the details but, for example, they point out that on the Bridger-Teton National Forest, there are approximately 1,600 oil and gas leases covering 2.3 million acres. And they point out that a lot of those areas are in prime grizzly bear habitat.

They go on to say there is additional acreage in the Targhee National Forest. Then we get to geothermal leasing which they also detail, and we have already discussed that. They get to logging which we have already discussed. They point out that the recently released Targhee National Forest plan states that for areas adjacent to Yellowstone, a heavy short-term impact on wildlife habitat will occur, as a result of accelerated salvage of lodgepole pine stands killed by the pine beetle. The plan notes that logging will affect 7,200 acres of Situation I grizzly bear habitat each year. They show a picture of a clearcut stretching for several miles along the border of the west side of Yellowstone Park.

There is a section that discusses the mining activity and thousands of mining claims in the area. Another one that details the hydro projects, including proposed building of a dam on the Yellowstone River at Allen Spur 50 miles north of the park, and a proposal to build a new dam below the Jackson Lake Dam which would cost $38 million and flood 2,000 acres of Grand Teton National Park.

Mr. **Cheney**. Mr. Chairman, just a moment. Would the gentleman yield?

Mr. **Seiberling**. In just a minute I will yield.

Then it details threats such as the Ski Yellowstone project, which would result in thousands of people coming into the area in Idaho just west of the park.

All I am saying is that it isn't imaginary; it is all detailed here. And we will have a lot of witnesses that will detail it some more.

So let's not assume that we are just here for some exercise.

Mr. **Cheney**. Mr. Chairman.

Mr. **Seiberling**. I will be glad to yield.

Mr. **Cheney**. I will take a back seat to no one in my love for Yellowstone or Northwest Wyoming. I have probably spent more time there than anyone, except perhaps Mr. Barbee, the Superintendent of the Park, and I envy him his job.

Many of us are concerned as we are being asked to fundamentally reorganize the current land mangement scheme, and obviously also take steps to stop certain types of economic activity on the basis that there are threats, that the list of threats presented to us are fallacious.

The list you just read included the proposal for a dam below the existing Jackson Lake Dam on the Snake River in Jackson, WY. That was an option considered by the Bureau of Reclamation when it was found the Jackson Lake Dam was unsafe. It was rejected and rejected by everybody who considered it.

The Congress has already authorized and approved and had funded the repair to the existing Jackson Lake Dam in a manner that is totally consistent with what the Park Service wanted. It is inside a national park. We have done it very successfully.

That list that you just read, I am sure if we went down it we could find a number of things exactly like that.

I would hope that this hearing does not in fact become an attempt to create the false notion, based upon fundamentally inaccurate statements, that there is a major threat to the area.

I am perfectly prepared to deal with identifiable, factual threats. I don't think this committee ought to be asked to deal with fallacious, made-up, statements or comments that simply are not true, in terms of supposedly constituting a threat to the park.

Mr. SEIBERLING. If I can reclaim my time, I agree with the gentleman. This book is out of date. That other book is evidently full of misinformation.

Mr. VENTO. Will the gentleman yield?

Mr. SEIBERLING. The purpose of this hearing is to find out if there is a problem, and if so, what is being done about it.

Mr. VENTO. Will the Chairman yield?

Mr. SEIBERLING. Just briefly, because we have a vote on.

Mr. VENTO. Yes, I know, and it is an important vote.

I want to point out that in the CRS study that my colleague from Wyoming pointed out—incidentally, the statement I read was from the superintendent with respect to the reduction in the number of bears in Yellowstone.

Mr. SEIBERLING. We don't have any more time.

Mr. VENTO. The point is, though, that on page 9 of the CRS report, they footnote it from 1985 and 1984. That should be noted in terms of comments about the viable bear population and lack thereof at this time.

Mr. SEIBERLING. We are here to find the facts, not to prejudge them.

We thank the panel. We appreciate very much your being here.

I think it would be a good idea if somebody could be here from the Interior Department during Mr. Peterson's testimony.

I think we all ought to take a break for lunch. So why don't we try to get back here about 1:30 for Mr. Peterson's testimony, if that is OK with you, Max.

Mr. PETERSON. OK.

Mr. SEIBERLING. Thank you.

[Whereupon, at 1:05 p.m., the subcommittees recessed, to reconvene at 1:30 p.m., this same day.]

AFTER RECESS

Mr. SEIBERLING. The subcommittee will please come to order.

Will all those who are looking for seats please take a seat if they can find one. We still have a long way to go here.

Our next witness is a person not unfamiliar to members of this subcommittee, Mr. Max Peterson, Chief of the Forest Service, Department of Agriculture.

Always a pleasure to see you, Max. Sorry we took so long to get to you.

[Prepared statement of Hon. R. Max Peterson may be found in the appendix.]

STATEMENT OF HON. R. MAX PETERSON, CHIEF, FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE, ACCOMPANIED BY BARBARA L. HOLDER, DIRECTOR, WILDLIFE AND FISHERIES, REGION I; AND DALE BOSWORTH, REGIONAL PLANNER, REGION I

Mr. SEIBERLING. You're on.

Mr. PETERSON. Thank you, Mr. Chairman.

First I would like to introduce Barbara Holder, a wildlife biologist and our wildlife staff director for the northern region. On my left, Dale Bosworth, regional planner for the northern region. They might assist me, Mr. Chairman, if you have specific questions.

Mr. Chairman, in view of the time and the fact that it is escaping us, I would like to ask you to accept my statement for the record and to allow me to abbreviate it.

Mr. SEIBERLING. Your statement will be included in the record in full, and you may proceed as you wish.

Mr. PETERSON. Mr. Chairman, I do appreciate being here to participate in this hearing. We are all aware of the high degree of public interest in the management of the outstanding natural resources and features of the greater Yellowstone area.

We believe that the interagency cooperative management in this area has been successful over a long period of time. In fact, I would say this is probably the most coordinated place on earth in terms of the long-term work and coordination, which I will talk more about in my statement.

As was indicated by the previous witnesses, the many and special values of Yellowstone Park are well known. Maybe not as well known is the fact that the national forests were created shortly after the turn of the century from what was withdrawn in 1891 as the Yellowstone Timberland Reserve. This reserve was created for production of timber products and protection of watershed resources.

There are portions of eight national forests, which were established between 1897 and 1908, are located within this Yellowstone area. These national forests, as you know, are managed in accordance with the principles of multiple use and sustained yield. Two wildlife refuges as well as the Grand Teton National Park and John D. Rockefeller Memorial Parkway also lie within the Yellowstone area.

Mr. Chairman, I have a map of the Yellowstone area with me. The map may facilitate the work of the committee. We are prepared to leave the map here for your use, if it will help you.

Mr. SEIBERLING. Thank you. We will be glad to make use of it.

Mr. PETERSON. This map shows Yellowstone National Park and Grand Teton National Park in yellow in the center surrounded by solid green which represents the national forests. There is however, a considerable amount of private land interspersed within the green areas. It is not solid Federal ownership.

The private land is primarily located along the major roads and drainages. The fact that there is very little private land has result-

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ed in an economy that is heavily dependent on the use of and resources from the Federal lands.

The local residents use the Federal lands as well as State lands almost exclusively for most of their outdoor recreation. The livestock industry in this area has historically used forage from national forests to support a viable year-round operation. They do this by using their home ranch in the wintertime and national forest lands during the summer.

Local lumber mills and many small family-run operations that supply poles, mine props and other wood products have been in place for well over 100 years using the national forest timber resources of this area.

Commercial outfitters and guides use these Federal lands and water for a large portion of their operations.

Mr. Chairman, I think you will find that in our planning processes there is a very high degree of cooperation and coordination. As was mentioned in some of the earlier questioning, this should be two way, and that is our intent. The park is affected by what happens outside on the forests, but the forests are affected similarly by decisions made in the park.

For example, the pending decision on the relocation of Fishing Bridge might have substantial impact on surrounding national forests. In fact, national forests collectively have more recreation than do the two national parks. To a large extent, the surrounding national forests already serve as a bedroom area for the national parks.

Designated wildness areas—the shaded areas in this overlay—already totals over 4 million acres or 30 percent of the National Forest System lands involved. The shaded areas on this overlay are already designated as wilderness.

You will note that in Idaho and Montana the final wilderness bills have not yet been written. But this gives you an idea of the protected area around Yellowstone National Park.

Mr. SEIBERLING. If everybody could shift over one seat to the right, I think we could see the map a little better.

Mr. PETERSON. The national forests surrounding the park provide a substantial part of the habitat required for the grizzly bear. And for many years, we have realized the interrelationships between the park and its surroundings.

Elk migrate into and out of the park. There is no hunting allowed in the park; however, hunting takes place in the private lands and national forests outside, which help keep the numbers of elk in balance with the available food supply.

Livestock grazing, as I mentioned, is one of the oldest historic land uses on the national forests. Most of the social and economic structure of the area is tied directly to ranching and farming.

National forests around Yellowstone contain important commercial forest lands. These provide a wide variety of forest products.

Might I interject at this point that there is a popular misconception that timber harvesting, and especially clearcuts, are automatically detrimental to grizzlies.

I would like Barbara Holder to give you a couple of words on that before I finish my testimony.

Ms. **Holder**. I think those points were raised earlier in testimony.

We simply can't deal with the question of clearcuts or timber harvest in general, in a generic kind of way. These activities can have negative effects, neutral effects, and in some cases very positive effects on grizzly bears.

Some recent radio collar work in northern Idaho with grizzly bears demonstrates that bears are actually seeking out clearcuts for roots, berries, and molts. I think the point should be noted that bears are a wide-ranging species and they have wide-ranging food requirements which vary by season. Potential threats must be addressed in a site-specific way to the specific bear unit, habitat conditions, and individual bear requirements.

Mr. **Peterson**. I think the point is that there is a great tendency to catalog individual things as threats that cannot be considered individually but have to be looked at as a part of the total diversity of habitat that bears need.

It would be possible, for example, to protect the bear to death. For example, in protecting him, we might protect the habitat to the point where it was not suitable for him. That is one reason both the Park Service and Forest Service are using fire in the Greater Yellowstone Ecosystem to create briar habitat that bears need during part of the year.

I think we all recognize there is a lot of complementary management of the national parks and the surrounding lands.

In many respects, the national forests provide a transition between the preservation in the park and the more developed private lands, for example, in the Jackson area.

We look upon our charge in that area with the Park Service as one of being good neighbors, of being cooperative in trying to see how we can carry out our missions in the overall interest of the public.

Let me point out that one of the things that is not easily understood is that this is a huge area. When you talk about some of the activities that were mentioned as threats this morning, they are about as far away from Yellowstone Park as Richmond, VA or Philadelphia, PA are from Washington.

An oil well may or may not have significant effect on surrounding areas depending on how it is done.

All of the national forest plans that are developed are developed in draft. They go to the public, to States, to park superintendents, to the Fish and Wildlife Service, and others for comment. As far back as the 1950's, it was apparent to the Federal land managers in the area that they needed to formalize some of the informal coordination mechanisms that were in place.

The Greater Yellowstone Coordinating Committee was established in the early 1960's to meet this need. Committee membership includes the Regional Foresters of the Northern, Rocky Mountain, and Intermountain Regions of the Forest Service; the Rocky Mountain Regional Director of the National Park Service; the Superintendents of Yellowstone and Grand Teton National Parks; and the supervisors of the Gallatin, Targhee, Beaverhead, Custer, Shoshone, and Bridger-Teton National Forests.

Director Mott recommended this morning, and I agree, that it would be desirable to add the Fish and Wildlife Service, the Bureau of Land Management, and probably the U.S. Geological Service to the committee because of some of the questions that have been raised. It has been the pattern in the past to invite other Federal, State, and local governments to meet where an issue was raised that required their expertise.

The coordination meetings are held at least once a year result in additional meetings to deal with specific issues. For example, we determined several years ago that people using the trails in the Yellowstone area went in and out of different jurisdictions. In some jurisdictions they could have a gun and others they couldn't. Some jurisdictions you could have a horse and others you couldn't. So we developed procedures to ensure that people going into the area had adequate information on what was allowed and what was not allowed.

We developed uniform signing. More recently, we developed uniform outfitter and guide policies to govern such simple things as how to store food, so that people don't increase the risk of a grizzly encounter by the way they store food when they are camping.

Some other things that this committee has done include development of the Greater Yellowstone Grizzly Bear Guidelines in 1974, which have been uniformly accepted as the primary source for management considerations involving the grizzly bear. We developed the "Bear Us in Mind" grizzly bear education campaign back in 1982, which is a educational program to inform the public. As was indicated earlier this morning, we have more likelihood of training the people than we do the bear to avoid human-bear conflict.

I mentioned the outfitter policy for the Greater Yellowstone Area. There has long been cooperation on elk management between the various agencies. In 1978, the Greater Yellowstone Regional Cooperative Transportation Study looked at regional transportation questions. I would never say, Mr. Chairman, that you could ever have coordination that was perfect or would automatically answer your question, but I have been familiar with and involved in what was happening in greater Yellowstone for about 25 years and as I said in my opening statement, I think this is one of the best coordinated places on earth.

The work of the Interagency Grizzly Bear Committee that has been mentioned previously this morning is recognized nationally and internationally as one of the real pilot efforts in bringing expertise from different agencies to bear. Expertise for making detailed project decisions as well as making planning decisions.

There are probably a couple of additional things that we could do and which we will do. We have designated the regional forester of the Rocky Mountain region in Denver as our primary coordinator for the Yellowstone area. He will continue to work closely with his regional counterparts in the Park Service and Fish and Wildlife Service.

The reason for that designation is that he is located in Denver where the regional director of the Park Service and Fish and Wildlife Service are located.

We believe upon completion of the first round of national forest planning, and hopefully the update of the park resource plans, that we should aggregate those plans. We should look at points that need to be clarified or changed to ensure that those plans are compatible.

In cooperation with the States involved, we intend to give priority to implementing wildlife and fisheries habitat improvement projects that were identified in the forest plans. This would be primarily directed to the enhancement of the grizzly bear habitat.

In summary, Mr. Chairman, although I never claim perfection, we believe the Yellowstone area has been a model for interagency cooperation and mnanagement. We expect—and I recently talked to all of our regional foresters in the area—that we be fully cognizant of the natural values of the area and exercise care and sensitivity in the decisionmaking. I believe that all of the agencies take pride in their management of the area, the close working relationships which have developed, the responsiveness to local and national needs, and serving the public as professional resource managers.

Mr. Chairman, this concludes a quick summary of my testimony. I will answer your questions, if I may.

Mr. SEIBERLING. Thanks for some excellent testimony. Apparently you and Director Mott are thinking along similar lines, because his chart that he submitted as something he has been thinking about, seems to fit in with what you have outlined on page 12 of your testimony. I wonder if you and he can get together and see if you can't come up with a mutually agreed upon format.

Mr. PETERSON. We expect to do that. We see that really as an enlargement of the existing interagency committee that involves the park and Forest Services. This would bring in the other agencies. We plan to do that.

Mr. SEIBERLING. It seems to me that both of you are doing what I think is needed here, and that is trying to develop a specific structure for overall coordination even beyond what exists now. I certainly commend you for it. That is one of the things that I had hoped we would bring out as a result of this hearing. That was the first question I was going to ask you, and I think you have already answered it.

With respect to oil and gas leasing, you heard Mr. Burford say that the Forest Service, for all practical purposes, has a veto power over oil and gas leases in the national forests, in the Yellowstone Park area. Does that fit in with your view of your powers?

Mr. PETERSON. Yes; he is correct, Mr. Chairman. As a practical matter, since the midforties we have operated with a memorandum of understanding between the two departments. We perform the pre-lease function on national forest lands, including recommendations as to whether the area should be leased or not. In the 40 years that memorandum has been in place, our recommendations have been followed.

Mr. SEIBERLING. Is the Forest Service satisfied with the leasing that has taken place in the vicinity of Yellowstone Park? Were their recommendations complied with in every case?

Mr. PETERSON. Our recommendations were complied with where national forest land was involved. There is some State and private land. I believe there is some State leasing in Idaho, which we do not have anything to do with, but as far as national forests are concerned, yes.

Mr. Seiberling. If only preliminary environmental assessments are made prior to deciding to lease a particular area, how can you have an adequate basis for making recommendations if you don't have a really th[illegible]h enviromental impact draft EIS, or full EIS?

Mr. Peterson. Mr. Chairman, I don't think there is anybody alive that can make an EIS covering the development phase of a proposed oil and gas activity in the pre-lease phase, because you simply don't know what is there.

Mr. Seiberling. But you could make some assumptions that if oil and gas were found, then the impacts would be so and so?

Mr. Peterson. That is exactly what we do. We look at an area, we make some assumptions about what might happen. We may put in no surface occupancy stipulations or we may recommend the denial of a lease. We sometimes put in very specific stipulations that point out the protection and mitigation requirements. We always put in requirements for threatened and endangered species, for example. In the real world, what you have to do is at the prelease phase is to evaluate using some assumptions. You have an opportunity later in the process where you can put in mitigation and other kinds of measures, because you really can't tell in the prelease phase what is going to happen.

Let me add one further piece of information. Only about 1 to 2 percent of the leases are drilled on. It would be an enormous waste of public money to try to evaluate all of the possible environmental impacts at that State.

Mr. Seiberling. Has the Forest Service ever asked the BLM to deny an application in the Yellowstone area?

Mr. Peterson. I would expect we have. I know we have in other places.

Mr. Seiberling. Could you check back say for 5 years and see if there have been any cases?

Mr. Peterson. Let me point out that in the Island Park Geothermal Area, where the Secretary of Agriculture does have legal consent authority, the Secretary of Agriculture on January 15, 1980, specifically withheld consent to lease.

Mr. Seiberling. I was talking, though, about oil and gas leases.

Mr. Peterson. Yes; I am not sure we have——

Mr. Seiberling. If you do, I would appreciate it.

One other thing. Do you monitor the permits that are in the national forests even though the BLM is the one that licenses?

Mr. Peterson. We monitor the post-leasing phase as far as impact on all of the surface resources including wildlife. The BLM or USGS monitors the recovery of the oil and the subsurface resources.

Mr. Seiberling. I have to go and vote. I am yielding to Mr. Vento.

Mr. Vento. Thank you, Mr. Chairman.

Mr. Peterson, I am sorry if we are getting up and down here but the idea is to move this forward, which is what we are trying to do. I understand the chairman did ask about the organizational chart.

Mr. Peterson. Yes.

Mr. Vento. And you answered?

Mr. **Peterson**. I think it is a good one. We are in accord with the proposal.

Mr. **Vento**. You think it is necessary?

Mr. **Peterson**. It brings in some other agencies that we have brought in on a case-by-case basis, but I think there is some merit in having them as standing members of the committee.

Mr. **Vento**. Do you think there ought to be a merger of some of the different plans in that area?

Mr. **Peterson**. I don't see the need for a merger. What we see is the need to take things like grizzly bears, elk and trumpter swans that move across those jurisdictions. and be sure they are adequately coordinated. That is what we are trying to do.

Mr. **Vento**. But I mean the point is if you do that on a case-by-cased basis, isn't that kind of inefficient?

Mr. **Peterson**. Well, I don't think you can do it with some kind of a sweeping generality. For example, we discussed the migration of grizzly bears. Well, in the first place, grizzly bears don't migrate. They hibernate.

Mr. **Vento**. I think what was probably meant is that they move around and have a certain range.

Mr. **Peterson**. OK, they move around and have a certain range. So when you are looking at the impact on grizzly bears, you have got to look at the specific range and the specific habitat and specifically what it is doing. You can't consider generalities.

Mr. **Vento**. Nobody is talking about generalities, I guess. I suppose that in some sense there is going to be a certain level of generality, no matter how specific or more comprehensive we try to make it.

You received these statements from the Park Service on the Gallatin National Forest, which my friend Congressman Weaver pointed out earlier—I referred to them—there are a lot of comments there about the management plan for that forest. What generally has been your response to these? Have you incorporated all of these suggestions to try to limit the impact? Do you agree, concur? What has been the disposition of those comments?

Mr. **Peterson**. I can't tell you about those specific comments, because that was a draft plan.

Mr. **Vento**. That was initially proposed, and they were responding to it?

Mr. **Peterson**. Yes; let me point out in all candor that those comments came from the park superintendent. The official consultation on grizzly bears is with the U.S. Fish and Wildlife Service.

Mr. **Vento**. I wasn't just talking about the grizzly bear.

Mr. **Peterson**. Well, that was the thrust of most of his comments. It had to do with the grizzly bear.

Mr. **Vento**. Well, there are some in here about other things too. It seems to me he had some comments in here about leasing.

Mr. **Peterson**. But they were all tied back to grizzly bear, including his statement on timber sales.

Mr. **Vento**. Also, the Elk winter range and others. There are a lot of them, that is true, but he also had comments on energy and mineral exploration and development. They are quite extensive. There is the elk. There are a few other points in there. The point is that they were responding to a draft plan, and you can't tell me what the disposition of those comments are?

Mr. Peterson. No; we have an interdisciplinary team in the field that receives all comments, Fish and Wildlife, State, and public comments. They look at all of those comments. When they develop the final plan, they will respond to each one of them in terms of what they did.

Mr. Vento. Tell me this, Mr. Peterson. Are there any legal restraints on the Forest Service in terms of responding to maintenance of the natural resources in what has been referred to here as—well, in the park, referring to the impact you will have on natural resources in the park? Are there any legal impediments that you have in terms of responding to what the needs are, in terms of the park's mission?

Mr. Peterson. You might turn that around and say is there anything that prevent the two from cooperating.

Mr. Vento. I asked the question of Mr. Mott earlier, and he answered it, so I thought it might be fair that you answer it for yourself.

Mr. Peterson. No; there is no legal impediment.

Mr. Vento. In other words, don't you have a mandate in terms of mission, in terms of development and utilization of those resources within the guidelines established in certain areas that are being considered or classified as wilderness, mineral leasing, and so forth and so on?

Mr. Peterson. Mineral leasing is discretionary.

Mr. Vento. Right; you can put conditions on that, can't you, in terms of what activity takes place. What type of draft conditions have you proposed for the various leases that are around, I guess some 60,000 or 70,000 acres?

Mr. Peterson. We would be glad to provide that, sir. They are different for each lease.

Mr. Vento. Do you happen to have conditions stipulated with the leases?

Mr. Peterson. Yes.

Mr. Vento. Prior to entering into the lease there are conditions that are put on them?

Mr. Peterson. That is right.

Mr. Vento. Mr. Buford gave us the impression that there was no enviromental impact statement that has gone on or no assessment.

Mr. Peterson. I am sure that was not what he intended to convey.

Mr. Vento. No; I think it is quite specifically what he intended to convey.

Mr. Peterson. If that is your understanding, it is in error.

Mr. Vento. That is what he testified to.

Mr. Peterson. There is an environmental assessment or an environmental impact statement before a lease is provided.

Mr. Vento. He said only when they are ready to go. He said not when the lease is provided. It is only when they get ready to drill or ready to take action.

Mr. Peterson. I think he was referring there to where there was a full-blown environmental impact statement. Many times the full-blown environmental impact statement waits until that second phase.

Mr. **Vento**. Do you think that is the last word you have with regard to those leases?

Mr. **Peterson**. No, sir; it is not the last word. When the lease is issued, we can put stipulations on the lease itself, and then when the leaseholder wants to drill or do some other activity, it comes back to us again, and we can look at it and put additional conditions or stipulations on it.

Mr. **Vento**. Are you doing anything independently to understand the geothermal features, for instance, of the Gallatin Forests, now suspected to be a prime source of the geysers in Yellowstone Park?

Mr. **Peterson**. It is primary technical expertise that rests with the U.S. Geological Survey, and yes, the U.S. Geological Survey is doing some very specific work in trying to understand the geysers.

Mr. **Vento**. When I asked Mr. Burford that, he said that they were getting ready to drill. The exploratory drilling that they were going to do is stopped by the Melcher amendments. Is that the same experimental or evaluation work you are talking about?

Mr. **Peterson**. You were talking about the Gallatin Forest which is to the north

Mr. **Vento**. Yes.

Mr. **Peterson**. He was talking about the Targhee Forest to the east, where the Island Park area is. There was a proposal.

Mr. **Vento**. You are not talking aout that type of research in the Gallatin area, are you?

Mr. **Peterson**. I don't know. They probably will do other kinds of research first. They will probably do isotope work and other kinds of detailed work, and then they will probably drill.

Mr. **Vento**. It reminds me of the kid testing to see if a frog was alive. They stick it good and if it was alive before it isn't after this situation.

Mr. **Peterson**. If this situation was a frog, it might be appropriate.

Mr. **Vento**. It is just an analogy, Mr. Peterson. You want to talk about the grizzly bear a lot today. Have you incorporated the recommendations on the Grizzly Bear Task Force in your management policy?

Mr. **Peterson**. Yes, we have.

Mr. **Vento**. You have completely incorporated those in your management policies?

Mr. **Peterson**. We are doing that as we complete forest plans. I issued a couple of months ago a letter incorporating all those recommendations that came from the committee.

Mr. **Vento**. You mentioned that you have a lot of recreational resources within the park, and cultural resources and so forth. What are you doing to protect cultural resources within the park as well as other natural ones? Let's just take the cultural ones as an example.

Mr. **Peterson**. You mean within the forests?

Mr. **Vento**. Well, yes, that is what I meant. I am sorry.

Mr. **Peterson**. We do a cultural resource analysis for each forest to determine what cultural resources are there. We develop plans for protection of those cultural resources. We have a specific re-

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quirement that before any kind of site disturbance is done that there be a cultural resource analysis made, so we have a pretty well-developed cultural resource program. That is required by law, of course.

Mr. VENTO. Can you describe blueprint 2,000?

Mr. PETERSON. That was an attempt to try to have everybody consider what this area is likely to look like in the year 2000.

Mr. VENTO. When did this initiative start?

Mr. PETERSON. We have been conceptualizing this for some time, becaue it is part of our forest planning. In forest planning we look ahead for a number of years.

Mr. VENTO. When did you announce it?

Mr. PETERSON. We have been talking about it for months.

Mr. VENTO. For months?

Mr. PETERSON. For months, yes.

Mr. VENTO. So as it applies generally nationwide or just specifically to this area?

Mr. PETERSON. We are trying to look ahead to the year 2000 in many areas where we have interrelated concern as we have here. We have worked in southern California to look at what southern California might be like in the year 2000 as it relates to handling fire problems, urban development and urban interface with wildlife. We are trying to look ahead to the year 2000 in several places. The idea would be to get ahead of the ball game and to look at things that might happen, rather than just reacting to things as they happen.

Mr. VENTO. Tell me, in the plan or in the expectations of the Forest Service as it applies to the area around these forests that are talked about as being in this ecosystem, I have information which says that they plan on increasing the amount of roads by some 40 percent in the next 5 years. Is that right?

Mr. PETERSON. That is correct.

Mr. VENTO. What is the correct figure?

Mr. PETERSON. I will be glad to give you the numbers here for the record, if you will give me a moment.

Mr. VENTO. I would be happy to do that.

They further state that this will mean—the information I have is that there would be some 25,000 miles worth of timber roads within the forests at the conclusion of this period.

Mr. PETERSON. For the Gallatin, Custer, Bridger-Teton, Targhee, and Shoshone, we expect—for the whole forest, not just the parts in the ecosystem—to average about 65 miles of road for the next 10 years per year.

Mr. VENTO. Sixty-five miles for the next 10 years. So you expect 650. What would that bring the total to; do you have any idea?

Mr. PETERSON. It may increase a very little, because we will also be closing some roads as we construct others. We have some roads in places where we would rather not have them. They might be in camping areas. Not all of these roads will be open.

Mr. VENTO. Just temporary?

Mr. PETERSON. They may be seasonal roads.

Mr. WEAVER. Will the gentleman yield?

Mr. VENTO. Briefly, because I have used up my time.

Mr. **Weaver**. I think this road question is critical. You have got 650 miles of roads. Roughly, those forests are only about 70 miles from north to south, and only about 20 miles wide. It strikes me 650 miles of road——

Mr. **Peterson**. Would you believe about 150 by 60 miles?

Mr. **Weaver**. What?

Mr. **Peterson**. 150 miles by 60 miles.

Mr. **Weaver**. I am missing that deep point down there, from what I can see, but the basic area, if you drew those roads in right now on that map—and I would like to see you do that, Chief—just get red ink and just draw those 650 miles of roads in—I think it would be pretty dramatic. While you are answering questions, could one of your people start to draw the roads in so we can look at them?

Mr. **Peterson**. In the first place, nobody knows exactly where they are going to be, because that is determined after detailed analysis on the ground.

Mr. **Weaver**. Would you draw 650 miles worth of roads in red ink on that plastic?

Mr. **Vento**. Isn't there a seventh forest that is involved as well in the area? The area is not specific, but is that just a small piece? Is that why you excluded that?

Mr. **Peterson**. I think the other forest was probably the Caribou, and depending on what maps you see, sometimes the Caribou piece is in and sometimes it is out, so we didn't include the Caribou statistics.

Mr. **Vento**. I think it would be useful to submit for the record what your expectations are, if you have that replicated at some point, Mr. Peterson.

Mr. **Peterson**. We do.

Mr. **Vento**. Maybe Mr. Weaver can get back on his own time with that question. But in the meantime, I will call on Mr. Marlenee, now that I have used up 10 minutes.

Mr. **Marlenee**. I thank the chairman for yielding.

Max, I will apologize for not understanding where the 650 miles of roads were. What were you referring to?

Mr. **Peterson**. We expect about 65 miles of roads per year to be built on those six national forests, which would be a total of 650 miles in the six national forests over the next 10 years.

Mr. **Marlenee**. Yes; and due to the mitigations that you make for wildlife management, do you expect to close some roads?

Mr. **Peterson**. Yes, we do. In fact, as I mentioned, we will close some existing roads as we replace them with new roads.

Mr. **Marlenee**. So you will close roads and open some roads, close some to mitigate the wildlife impacts or other impacts, and may in fact end up with a net loss as far as the mileage of roads?

Mr. **Peterson**. We could well do that. You see, the final decision on how many miles of road will be closed will be made in the forest plan, as they look at detailed information.

Mr. **Marlenee**. Certainly I think that this is one of the things that is grossly misunderstood by the general public, and grossly exaggerated by those who would like to see road closures or stop the road-building programs in our area. With regard to that, I notice that one of the impacts, Mr. Peterson, Chief, is the West Gardner access road down the Yellowstone Valley toward the park.

Now, this West Gardner access road—before we go on to that, I note that there are 14,273,123 acres of forests. That is a little incredible, that 650 miles of road, even if it were added to the whole system, is going to destroy the balance of nature there. I would say more likely that with the wildlife mitigations that you have built into it, it will enhance it.

The West Gardner access, Chief, you have been having trouble with the cult group—which is a religious group, and I will not call them a cult, because I don't know it, but it is called the Church Universal and Triumphant, which seems to be in league with some of the environmental groups to stop a road access across their property, and block the general public from using the public land behind that property. Is that not correct?

Mr. Peterson. That is correct.

Mr. Marlenee. Could you explain that just briefly?

Mr. Peterson. The main highway runs along the valley, and they own an irregulary shaped piece of land between the road and the mountains.

Mr. Marlenee. And they have become the largest taxpayer in Park County, the largest landholder?

Mr. Peterson. I don't know that.

Mr. Marlenee. Well, I do.

Mr. Peterson. If you go along that road, they effectively block access to——

Mr. Marlenee. Thousands of ares.

Mr. Peterson. Depending upon how you compute it, it is probably somewhere between 25,000 acres and 100,000 acres. They in effect have that bottled this area up from public use. The question is how we provide public use of that area.

Mr. Marlenee. I observe that in this same valley, Chief, that the access for the general public to the public lands is quite limited.

Mr. Peterson. That is correct.

Mr. Marlenee. Is that correct?

Mr. Peterson. That is correct.

Mr. Marlenee. And that the guy that works in the filling station and wants to take his son and wife and five ice cream-smeared kids out there to enjoy the public land, to get a little shade under a tree or camp beside a live stream, is precluded because of those blockages of access?

Mr. Peterson. That is correct, unless he can get permission from the landowner in some way, which may or may not be available.

Mr. Marlenee. I find it deplorable that these groups would not allow an access road across their property, when they are blocking thousands of acres of land.

Mr. Weaver. Would my friend yield?

Mr. Marlenee. I will be happy to.

Mr. Weaver. Does my friend want to do away wth the institution of private property?

Mr. Marlenee. Oh, absolutely not. But if the gentleman had any kind of an ethic of the West, he would understand that you can't block a man from his property. If I own property and you are blocking the way, I have the right of access to my property. The

Government is a landholder the same as anyone else. The church is a landholder the same as anyone else. That is called taking without compensation, and in this case we have the church and the enviromental groups taking from the general public without compensation. If you had any kind of a western ethic, you would understand that.

Mr. WEAVER. If my friend would yield further, come on out and visit our Rajhneshees and you will get a different picture.

Mr. MARLENEE. The gentleman asked me to yield. I was responding to his question to me.

Mr. SEIBERLING. Who has the time?

Mr. MARLENEE. I do.

Much ado has been made about the timber sales, and their impacts on the game population. When we have a timber sale, what process do you go through in evaluating the impact on the game?

Mr. PETERSON. We look at it at two levels. We look at it as a part of the forest plan. We look at cover, food, water, and for different kinds of animals over the entire area at the forest planning level, and develop some overall guideliness at that stage.

But when an individual timber sale is made, we do a specific analysis of that timber sale, including how it might be harvested, how access might be provided, what cultural resources may be present and how this might contribute to what we are trying to do for wildlife.

In some places, the thing that may be controlling for a particular type of wildlife may be food on the floor. Elk eat what is on the ground, and so do deer, and so do grizzly bears.

Mr. MARLENEE. Let me ask you on that point, as long as you referred to the grizzly bear. Do grizzly bears have a good, herb that they eat in thick stands of lodge pole pine, or are they more inclined to take their nourishment from areas that had been cut over and have had a regrowth of vegetation?

Mr. PETERSON. I have got an expert on my right I am going to defer to.

Ms. HOLDER. In general, large unbroken stands of lodge pole pine are not a significant habitat requirement of grizzlies. It is not preferred habitat. Some of these stands may be used for thermal, or hiding cover.

Mr. MARLENEE. But isn't the cover that the grizzlies seek more in riparian or thick brush type of cover?

Ms. HOLDER. It tends to be. Another species, Douglas fir is primary. Whitebark pine is preferred forage in the fall. The open big game winter ranges are preferred areas in the early spring when that is all that is available to eat, so they have very different seasonal habitat requirements.

Mr. MARLENEE. Thank you. The final question that I might have, Max, if I might, or Chief——

Mr. PETERSON. Yes, sir.

Mr. MARLENEE. Have you ever refused to consult with the Park Service on an impact?

Mr. PETERSON. No; we have not.

Mr. MARLENEE. Or on a timber sale evaluation?

Mr. PETERSON. To my knowledge——

Mr. MARLENEE. A request that they have made?

Mr. PETERSON. We have never refused a request. I think the cooperation in the field is very good. If we found there was a problem, we would take action from here, if necessary.

Mr. MARLENEE. I would yield.

Mr. CHENEY. If the gentleman would yield on that point, just to follow up on the question. The point was made earlier by Mr. Vento that the Park Service, in the Yellowstone, Mr. Barbee particularly had commented on the forest plan—I believe it was on the Gallatin—concerning the relationship between logging and timbering in the forest and the grizzly. Does the Forest Service have the authority to timber, if that will in fact endanger a species like the grizzly?

Mr. PETERSON. No; we do not. In fact, the first thing that we have to decide is that it will not endanger a species.

Mr. CHENEY. Isn't it true that you have to first consult with the Fish and Wildlife Service?

Mr. PETERSON. Yes; we do consult with the Fish and Wildlife Service.

Mr. CHENEY. And if they find any threat at all to a species such as the grizzly, you either have to mitigate that threat or not take the action?

Mr. PETERSON. That is true.

Mr. CHENEY. And that is provided for by law?

Mr. PETERSON. That is correct.

Mr. CHENEY. And that is in fact the way the system works today?

Mr. PETERSON. Correct.

Mr. MARLENEE. That is a final point. Isn't there more wilderness and roadless areas surronding the park than the actual acres within the park?

Mr. PETERSON. Oh, yes. There is between two and three times as much roadless areas and wilderness area surrounding the park as there is in the park, depending on how you calculate it.

Mr. MARLENEE. And if we are worried about impacts, unless we think that wilderness is an adverse impact or a threat, as some of them have been listed here, then actually they are a buffer zone and a protection for the park, or a transition zone?

Mr. PETERSON. I think they are more properly a transition zone. I think there is in most cases very good cooperation at the field level between the Park Service and the forest supervisor, and that is where it has to occur. If they are trying to do something, whether it is the fishing bridge question inside the park or whether it is a timber sale outside, that coordination has to be right there. We must look at what alternatives are available to us and what the impacts of each would be.

Mr. MARLENEE. I have used enough time. I yield back the balance. I thank the witness and thank the chairman.

Mr. SEIBERLING. Thank you. Mr. Weaver.

Mr. WEAVER. Thank you, Mr. Chairman.

I just wondered if my friend from Montana knows about the two fellows who were hiking in the Montana woods right above Yellowstone, and they saw a grizzly across the draw. And one fellow immediately sat down—the Chief is laughing already because he told this to me—one guy immediately sits down and starts putting on track shoes. The other guy looks at him and says, "What are you putting on track shoes for?" He says, "You can't outrun that grizzly bear."

He says, "I don't want to outrun that grizzly bear, I want to outrun you."

These are the kinds of times we live in, I think.

Mr. Seiberling. Would the gentleman yield?

Mr. Weaver. Surely.

Mr. Seiberling. May I remind my colleague that time is moving on.

Mr. Marlenee. We have indeed outrun some grizzly bears, or tried to, and the State fish and game would give some of our grizzly bears to anybody who would take them, but we can't find any takers. I thank the gentleman for yielding.

Mr. Weaver. I tell my dear friend, the chairman, however, that he is not the only one who gets to tell jokes.

Chief, how much land in the six national forests of the ecosystem is leased for oil and gas now?

Mr. Peterson. I don't have that number with me. I will provide it to you as quickly as I can.

Mr. Weaver. Has the Forest Service ever recommended rejection of a drilling permit and a lease in the Yellowstone area?

Mr. Peterson. I expect we have.

Mr. Weaver. No; I want to know if you have.

Mr. Peterson. I don't know the answer to that categorically. We have in other locations. Whether we have here I don't know. We did, as I pointed out earlier, withhold consent for geothermal leasing.

Mr. Weaver. This is oil and gas that I am talking about here, though.

Mr. Peterson. I know that we recommended leasing with no surface occupancy in several locations on the Shoshone. In other words, we said the area can be leased, but you can't occupy that area, because of the situation 1 grizzly bear habitat. I know we have done that.

Mr. Weaver. Is there anybody here or down at your office that could tell us if you have ever recommended against a drilling permit in the Yellowstone area, that you could have call right now and get the answer before you leave the stand?

Mr. Peterson. Let's see what we can find out.

Mr. Weaver. Thank you, Chief. Aside from wilderness areas, and areas set aside for endangered species, where in the Yellowstone area does he Forest Service recommend against leasing? This is just area now I am talking about.

Mr. Peterson. We would recommend against leasing.

Mr. Weaver. I mean actually do now.

Mr. Peterson. We recommend—generally speaking in situation 1, grizzly bear habitat. It is very unlikely that we would agree to leasing those areas that have already been mapped in the forest plans situation 1 grizzly bear habitat.

Mr. Weaver. You said it is unlikely?

Mr. Peterson. It is very unlikely that we would.

Mr. Weaver. Do you have in your management plans of these forests actual areas other than wilderness and endangered species areas—and of course I asked you aside from endangered species

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areas, and a grizzly bear is an endangered species—where does the Forest Service recommend against leasing?

Mr. **Peterson**. We have, yes, some specifics in our plans that say you can't lease in these particular areas, yes.

Mr. **Weaver**. You do?

Mr. **Peterson**. Yes.

Mr. **Weaver**. What percentage of the forest?

Mr. **Peterson**. I don't know the percentage.

Mr. **Weaver**. You can find that out?

Mr. **Peterson**. Yes; on forests like the Shoshone, I know that in excess of 60 percent of that forest is not available for leasing.

Mr. **Weaver**. Speaking of the Shoshone——

Mr. **Marlenee**. Will the gentleman yield?

Mr. **Weaver** [continuing]. They did a drilling operation there by helicopter, that apparently was quite successful. Are you going to require all other drilling to be done in that fashion? If not, why not?

Mr. **Peterson**. Well, helicopter drilling is like any other technique. If you have a road within 100 feet of where you are going to drill, it would not be very practical to tell them to do it by helicopter. The impact of doing it that way would be greater than doing it some other way, so we look at each case individually. We have required helicopter drilling, and we will do it in the future, where we think it makes sense.

Mr. **Weaver**. My understanding is that you have leased oil and gas leases right up to the boundary of Yellowstone, just about everywhere, and I wondered, doesn't that fly in the face of any thoughtful environmentally sensitive policy of leasing?

Mr. **Peterson**. I don't think you can conclude that without looking at the specific location, and at what is proposed. An oil well has very little impact beyond its immediate vicinity. In areas like the Audubon refuge area in the south, you will find that they have oil wells operating right in the middle of the wildlife sanctuaries. An oil well per se is not necessarily detrimental to a big area around it.

Mr. **Weaver**. A final question, Mr. Chairman.

What effect does logging have on the grizzly bear insofar as it brings roads into habitat areas and people into habitat areas? In other words, do human conflicts affect the grizzly bear?

Mr. **Peterson**. Yes, they do, and of course the primary human-bear interface comes from mass recreation use. I think there have been 170 grizzly bear mortalities in the last 15 years from recreation conflict.

Mr. **Weaver**. And that is because of the logging roads brought in?

Mr. **Peterson**. No;

Mr. **Weaver**. That is my question, though.

Mr. **Peterson**. Recreationists are primarily brought in on State highways.

Mr. **Weaver**. No, my question is the roads, the logging operations that bring the roads in, that bring people in, what effect does that have on the grizzly?

Mr. **Peterson**. There could be some effect, if there is an actual confrontation during logging, but this not too likely, because of all the noise and everything that is going on. There is more likely to be contact between bear and people after the logging operation is over, when people are going into that area for hunting or other activity. The bear tend to like to use the roads, old landings, and clearcuts. So we have to be sure that people going in there understand they may see grizzly bears.

Mr. Weaver. I assume, then, that the grizzlies have multiplied a number of times in population in this area because of this. Is that correct?

Mr. Peterson. No; I am not suggesting that at all.

Mr. Weaver. Could we ask your young assistant?

Mr. Peterson. We can tell you what the grizzly bear population is.

Mr. Weaver. It must have burgeoned, right, with all the development?

Ms. Holder. Excuse me?

Mr. Weaver. I say, the grizzly bear population must have burgeoned with all the development that is going on. Right?

Ms. Holder. I think it is very difficult to talk about a grizzly bear population trend. A number of scientists have been trying to do that for years. The general feeling is that it has been on the decline, but not from direct habitat disturbances. The mortalities are largely human induced mortality in a very direct way. People kill bears, either through mistaken identity, through illegal killing, or because bears get into confrontation situations with humans, usually where food attractants are involved, and they have to be either relocated or removed.

Mr. Weaver. Thank you.

Ms. Holder. Direct mortalities are not easily associated with habitat disturbances.

Mr. Seiberling. Mr. Cheney.

Mr. Cheney. Thank you, Mr. Chairman. I will be very brief. I simply want to thank Mr. Peterson for being here today. As always, he has been helpful in terms of his contributions.

I think again for the record, I should point out in light of Mr. Weaver's concern about oil and gas leasing, that all of that sort of Yellowish-green territory on the map on the north side of Yellowstone, down the east side of Yellowstone, the south boundary of Yellowstone, all of that is wilderness. There is no oil and gas leasing in that area. There are some valid existing leases that were there before wilderness was created, but not many, and all of that is off limits.

I would like to reemphasize what Mr. Peterson said, that the Shoshone National Forest, which is the forest that covers everything, for example, in Wyoming there on the east side of the park, Washakie Wilderness Area, all the way down to the south end of the map there, that about 80 percent of that forest is off limtis to oil and gas leasing.

The notion that some would like to convey that somehow this area is wide open to development and the rapers and scrapers are sitting on the top of the hill with the engines on their bulldozers ready to roll is just simply not true. It is one of the best protected areas in the entire United States.

There may be areas where we need to do some more work. We are obviously willing to listen to argument. But to try to convey the impression that somehow nothing has been done to protect and preserve those areas from unwise timbering or from oil and gas development or from mineral development that might conceivably conflict iwth some of the other values we have there is just flat not true. I will be happy to yield to my friend from Montana.

Mr. Marlenee. I think I would add one other misconception that does exist, even in those national forests outside of the wilderness areas where leasing can take place. Is it not correct that there is a vast difference in the technical term of leasing, and the actual drilling permit, and there is a mile of regulation and control between the point of leasing and where they arrive at an actual drilling permit. Is it not also true, that there are dollars and dollars and dollars that flow into the Treasury from the leases that do not necessarily mean they end up in a drilling permit? The vast majority of leases are never drilled.

I yield back, Mr. Chairman.

Mr. Seiberling. Thank you. There is a vote on final passage on the reconciliation resolution. I am going to wait until Mr. Vento returns. I do have a couple of questions, Chief, and then maybe we will wind up as far as you are concerned. What is the status of Ski Yellowstone? Do they have a special use permit for developing the ski area in the Gallatin National Forest already?

Mr. Peterson. No; they do not. We have not yet issued a development permit. The perspective permittee has been working on a plan, has had considerable problems including some legal problems and some financial problems, and I would say the best description right now is that that is sort of in limbo.

Mr. Seiberling. The book put out by Montana magazine, called Greater Yellowstone says on page 91 that the proposed project application has been approved. You say that that is not correct?

Mr. Peterson. That is incorrect. We go through several phases on a ski area. We go through a phase in which we give the person a permit to do planning, but does not permit development. And the perspective permittee at this time does not have a development permit that would allow construction to begin prior to the completon of a commulative effects analysis.

Mr. Seiberling. The article goes on to say that:

> When complete, this four-season resort recreation subdivision will include 10 ski lifts, a gondola, a mountaintop restaurant, ski runs on 1,800 acres, all of which lie on Federal lands of the Gallatin National Forests and occupy grizzly bear habitat. On 1,100 acres of adjacent private land, two enormous villages will be constructed. Together, the two planned village facilities include 600 hotel rooms, nearly 500 condominiums, 224 private homes, and 225 units of employee housing, for a total overnight capacity of 4,920 persons.

It goes on to describe the tremendous influx of people that this is going to bring, if it ever comes to fruition. Assuming they solve their problems as far as financing and legal problems are concerned, what would be the reaction to the Forest Service of letting them go ahead with this kind of development?

[**Editor's note.**—In response to Chairman Seiberling's questions, the Department subsequently supplied the following additional information:]

United States
Department of
Agriculture

Forest
Service

Reply to 1510

Date JAN 17 [illegible]

Honorable John F. Seiberling
Chairman, Subcommittee on Public Lands
Committee on Interior and Insular Affairs
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

I appreciated the opportunity to testify before your Committee on October 24, 1985, concerning the Greater Yellowstone Area. You had several questions concerning the status of "Ski Yellowstone" (enclosed transcript, pages 176 and 177). I have reviewed my testimony and feel some clarification is appropriate.

The enclosed map outlines the area Ski Yellowstone Corporation is proposing for development which consists of approximately 1,100 acres of private land for skier services and approximately 1,700 acres of National Forest System land for ski slopes and lifts. To date, a 1-mile access road has been constructed across private land. A planning permit that precluded any physical disturbance was issued to the Ski Yellowstone Corporation upon approval of the Environmental Impact Statement in 1977. This permit granted permission to gather resource data and conduct surveys on National Forest System land.

Ski Yellowstone was not able to furnish sufficient information on its development capability until July 1982, at which time a special-use permit for development was issued. However, this permit precludes physical development until a final master plan, construction plans, and financial capability are accepted.

Authorization to proceed with construction of Ski Yellowstone will not be granted until the master plan is approved. The approval of the master plan is pending completion of a cumulative effects analysis on grizzly bears which is expected to be finished this summer. The results of the cumulative effects analysis may require changes in the master plan. It is not possible at this point to predict the results of the cumulative effects analysis or the nature and extent of changes that may be required. Such changes must be made and agreed to, construction plans approved, and final financial capability furnished before physical development could proceed under the special-use permit.

Sincerely,

R. MAX PETERSON
Chief

Enclosures (2)

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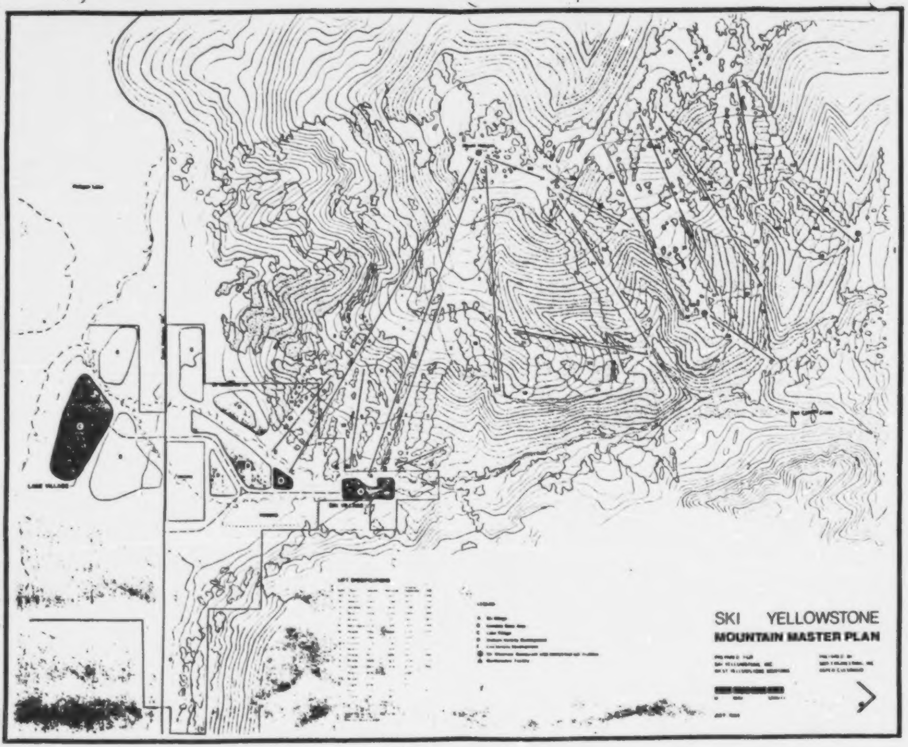
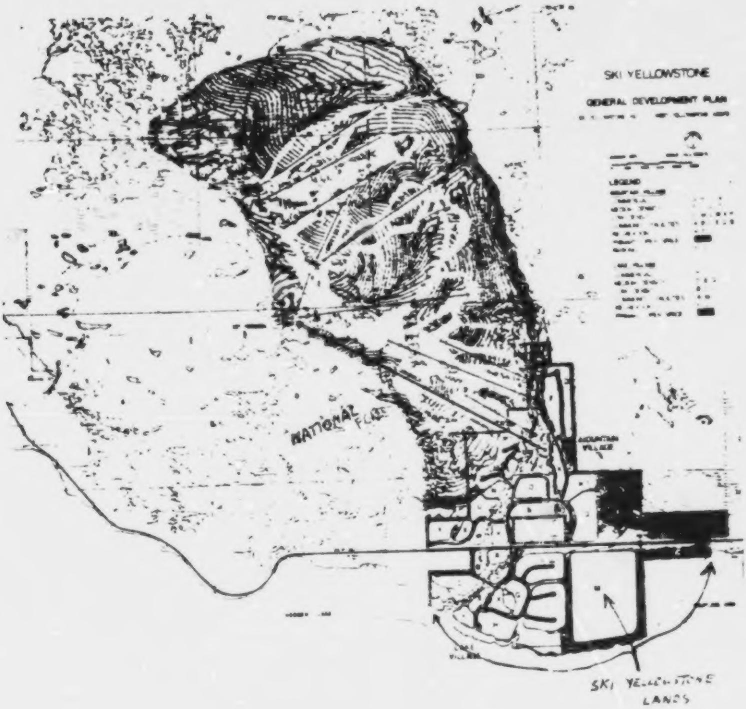

SKI YELLOWSTONE
MOUNTAIN MASTER PLAN


SKI YELLOWSTONE
GENERAL DEVELOPMENT PLAN
LEGEND
MOUNTAIN VILLAGE
NATIONAL FOREST
SKI YELLOWSTONE LANDS

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Mr. Peterson. We are making a cumulative effects analysis, in consultation with the Fish and Wildlife Services, on the grizzly bears of the specific development proposal. We would go through a very detailed analysis of the proposal, its impact on air, its impact on water, its impact on transportation.

We are consulting with the State of Montana and the counties involved and we may or may not approve anything like what the developers propose. We might approve something much smaller. We might approve as they propose it. I can't tell you the outcome of that.

Mr. Seiberling. Would you be likely to deny it if you found there would be a significant impact the on the grizzly bear?

Mr. Peterson. Absolutely.

Mr. Seiberling. All right. Are there any other ski areas on National forest lands around Yellowstone that are planned?

Mr. Peterson. I am not aware of any new ones around Yellowstone.

Mr. Seiberling. I have a couple of other questions so I will ask Mr. Vento if he could hold the fort here until I get back.

You might want to ask about the——

Mr. Vento [presiding]. I have a few questions of my own, Mr. Seiberling, just in case you need something. Earlier, Mr. Peterson, you referred to your associate and she referred to research work that was done in northern Idaho with regard to grizzly bear. But what was the characteristics of those forest cuts that were made there?

Ms. Holder. They were relatively small clearcuts. I am not sure of the size.

Mr. Vento. Well, 1 acre, 2 acres, 200 acres?

Ms. Holder. I don't know the size. I am sure they would probably be 10 acres or greater, between 10 and 14 acres.

Mr. Vento. They are small. How would you characterize that, Mr. Peterson, with the plan that you are pursuing in the various areas that are impacted by the bear in your forests?

Mr. Peterson. It would be fairly consistent.

Mr. Vento. You think your areas are small clearcut areas?

Mr. Peterson. Clearcut areas would probably be somewhere between 10 acres and 40 acres.

Mr. Vento. So you think they are very similar to this situation?

Mr. Peterson. Yes.

Mr. Vento. You are not sure what the areas in northern Idaho were?

Mr. Peterson. No; that kind of decision is made in a specific plan for a specific area. We don't decide that for the Nation as a whole.

Mr. Vento. I know. But I think the reference to the research was that that enhanced bear habitat and I wanted to be certain that we understand that this was not—this study was not done in Yellowstone, right? Have similar studies been done there?

Ms. Holder. I brought that example up only to try to make the point that it is very difficult to talk about timber management in general as being detrimental or positive toward grizzly bears. It depends on the species, the circumstances.

Mr. Vento. How much pressure is on the population?

Ms. **Holder**. Exactly.

Mr. **Vento**. Are they hunted in northern Idaho?

Ms. **Holder**. No; they are not.

Mr. **Vento**. The Congressional Research Service refers to a couple of studies with respect to them which I was going to enter in the record before but I think the entire CRS study will be in the record so I won't do that now. It says, "The low reproductive rate of bears has hampered recovery efforts. Females do not breed until age 5, and then tend to have only one or two cubs every 3 to 4 years. There are 32 female bears of reproductive age in the park." That is from Gary Turbak, "Grizzlies on the ropes," published in February 1984. So it is quite current.

The other paper refers to recent estimates, "A minimum of 125 bears should be maintained to insure high probability of a viable grizzly bear population for 100 years in the Yellowstone ecosystem." That is 85 by Suchy.

So the statistics I am just going to read this because I think it is useful and we will share this more fully with you, Chief, when you have concluded your testimony.

"Statistics on the unnatural deaths of bears are hard to obtain, since many kills are illegal. The only kill is a controversial hunt in Montana. The State places a limit of 25 dead bears from all man-caused sources annually, including road kills, so forth and so on."

Do you have illegal kills of bear that take place in the Forest Service areas, Mr. Peterson.

Mr. **Peterson**. We have historically had illegal kills, and about 3 or 4 years ago we cooperated with the Park Service and with the Fish and Wildlife Service in a special law enforcement effort to try to prevent illegal poaching of grizzly bears. There was a trade in selling some of parts of grizzly bears.

Not only do we cooperate in the law enforcement, we have specific stipulations in all of our permits that deal with protection of the grizzly bear.

Mr. **Vento**. I didn't want to turn this into a bear hearing myself but I think it is such a hot point, the point I tried to make with Mr. Craig earlier was, and I know you were sitting there, was that indeed if we want to avoid the types of conflicts then we have to try and provide circumstances where the habitat and the range for bears could be provided and where they move to winter hibernation. You know why I use the world migrate.

Mr. **Peterson**. We have a map of where bear mortality has occurred if you care to see it.

Mr. **Vento**. Yes. I guess you could probably put it up. I want to pursue just a little different track of questioning so you might want to put it in. I think that would be useful.

There have been a lot of problems with people blocking access to public land. It is becoming an increasing problem.

You referred to this situation where there was in private holdings a relatively small acreage in this particular land area we are discussing today, the Greater Yellowstone Ecosystem.

In other words there is less than 5 percent there that are both State and private holdings I think. Really the problems here are minimal, wouldn't you say?

Mr. Peterson. They would appear to be but they really are quite large.

Mr. Vento. Because of the key locations of some of these? I guess the statelands wouldn't be any problem. It's probably the private land problem.

Mr. Peterson. What happens is that in Montana most of the area was glaciated, so the valleys are fairly gentle. That is where the public road systems are. Typically the land on both sides of that road was homesteaded and is agricultural land. The problem is getting access from the road to the forest.

Mr. Vento. What kind of powers do you have in this particular instance? Are we talking about Forest Service powers of eminent domain to deal with this?

Mr. Peterson. We have the power of eminent domain but we exercise it rather carefully and cautiously.

Mr. Vento. I think you ought to. The point is these folks that own this land or have this land they are not doing anything illegal, are they? I mean my colleague referred to them as sort of an unusual group.

Mr. Peterson. I don't consider it illegal. I think he was referring to a specific law that says that I can't use my land to prevent you from getting to yours. You have the power of eminent domain in that case to goin access through my land.

Mr. Vento. In other words, an easement.

Mr. Peterson. You have the right to get an easement over my land if that is the only way you can practically get to your lands. So when we find this situation we first try to deal with it through negotiation. We try to figure out if there is a place we can get to the forest and work it out with the landowner, whether it is this or some other group.

Failing that, we then have to decide whether to ask for condemnation by the power of eminent domain.

Mr. Vento. I just wanted to clear that up because I think there is a lot of problems. We are getting complaints and letters from people who are being charged to go across land and being barred from going to get public lands.

I don't know. I don't come from the west. I come from east of the Mississippi. East of the Mississippi we don't like it either. Do uou want to make a comment about the chart that you have provided for the committee?

Mr. Peterson. There has been much discussion of bear mortality and I am sorry that Congressman Weaver isn't now. I would like to point out that bear mortality tends to occur where you have bears in conflict with large numbers of people. Sometimes it can happen with only a couple of people. But if you have a concentrated use of people and bears in an area, sooner or later you get somebody who will get into trouble.

Mr. Vento. What does this chart represent? The last 5 years?

Mr. Peterson. Ten years.

Mr. Vento. I just want to point out that my colleague, Mr. Cheney, is right and I am right. We talk about the numbers. We talk about the phenomena in terms of there are some unusual things happening in closing the gaps in the park that have brought the conflicts between people and bear, and eliminated rogue bears, whatever we call them. But in any case, that is about the other phenomenon, isn't it?

This inter-agency task force indentified moving through the transition to a more rational management plan in terms of habitat and so forth, that the transition brought about problems, didn't it Mr. Peterson?

Mr. PETERSON. Yes; I think the bears that were in Yellowstone Park 23 years ago subsisted mainly on human food.

Mr. VENTO. Garbage dumps, so on and so forth.

Mr. PETERSON. As near as we can tell, mortality has declined in the last 2 to 3 years and our best judgment is that the population has been relatively stable for that period. The reasons that mortality has declined include: stepped up law enforcement, work done by the communities to store food better, and the work done by the outfitters and guides.

A group that is going to testify later, the Audubon Society, has done a lot of work in public education, including offering rewards for people who illegally shoot the bear.

Mr. VENTO. Very good. That is an encouraging note, perhaps, to conclude that discussion of bear on.

We may get back into it a little later. Hopefully that will eliminate some of the conflicts if we can rationalize and deal with that and eliminate the conflicts between lifestock and the conflicts within the park that have been so prevalent as indicated by this map of bear kills that have occurred, for obviously generally good reason.

Some had been illegal but stepped up law enforcement and other procedures will hopefully mitigate those particular problems. Mr. Peterson, let me just take a different tact here. I see my colleague, Mr. Seiberling, is back. Do you have any comment about the herbicides or insecticides that you are currently using in forests and around the park.

We have been through the DOT questions with regards to what impact that might be. There is a whole different system of management you are using sometimes in the forest that might be applicable to the park.

Now I brought up the issue—I am sure you remember—with regards to the differences that occurred about fire and how they were going to respond to fire in the park and that there were differences of opinon with regards to Park Service and Forest Service.

What about with regards to herbicides and rodenticides and other types of treatments that you are using in these forests? Do you want to make a general comment about that?

Mr. PETERSON. The first comment I would make is that there isn't any timber harvesting inside the Park. We would expect there would be some differences.

Mr. VENTO. I understand that.

Mr. PETERSON. We have very rigid controls on herbicides, rodenticides and other chemical used on the forests to be sure that they are not detrimental to endangered species or other kinds of wildlife.

We use them in very small quantities, use them strictly within EPA lable requirements. So I am not aware of any problems that are created by their use on the forest.

Mr. Vento. You are using them obviously in this area. You might want to share with the committee data on this at some point, I think it would be useful at least for one of the forests around here. Give us some idea of the volume. I realize you won't have that with you today.

Mr. Peterson. What I would like to offer is that this committee might find it useful to go to the Shoshone forest, a live forest, and spend a couple days there with Steve Mealey, the forest supervisor, who did his graduate work on the grizzly bear, and see firsthand some of the things that are being done. I think it is extremely frustrating to try to visualize what we were talking about here today.

Mr. Vento. It surely is. We keep getting back to that grizzly bear. I think you are right and we would like to do that. Unfortunately we can't go as often but I intend to get there. I know my colleague has been there.

I had been to the Grand Tetons some years ago. Let me just conclude with one more question. You talked about closing some of the roads but you do encounter a little bit of public opposition when you start to close some of the roads and you get some casual or improper use of those roads, don't you, in terms of R.V.'s and so forth.

Mr. Peterson. A little bit but not really very much. We select roads to close make it very difficult to get around. We put in physical barriers.

It is not a question of whether you obey a sign. We actually physically close the road.

Mr. Vento. Thank you. Do you have something further you want to present to the committee? I saw staff bringing up something.

Mr. Peterson. Mr. Weaver asked the question, "Has the forest withheld a favorable recommendation for any oil and gas lease applications in the Yellowstone area? Yes, we have, for all or parts of many tracts."

We don't have the numbers here, but several tracts in both the Shoshone and the Gallatin.

The second question was, "Has the Forest Service withheld consent to an operating plan application for permits to drill for oil and gas leases in the area?"

What we have actually done is require very detailed mitigation and at times redoing the plan, redoing the proposal.

In essense, we have said we can't approve the way you presented it. You must go back and do something else. You might have to relocate the well to some other location. You might have to build a road in a different area, or you might have to do something else.

Mr. Vento. The answer is on oil and gas, yes, you have.

Mr. Peterson. Yes.

Mr. Vento. Thank you, Mr. Chairman.

Mr. Seiberling. Thank you, Chief. I know your ordeal is about over, but I have a couple more questions.

I would like to go out and spend a couple days in the Shoshone Forest and look at the grizzly bear, but I must say I have mixed feelings.

The idea of preservation of the species is a great concept. I just don't want to get too close to one of those preserved specimens.

I think that from the standpoint of the tourists, they must be pulled in two directions in terms of seeing grizzly bears, at least if they understand that a grizzly bear is a very mean tempered as well as powerful animal.

Mr. Peterson. I can guareantee you that on a dark night, when you are walking back to camp on a trail between two rows of lodgepoles, you are very much awake.

Mr. Seiberling. I keep hoping that maybe grizzly bears go to sleep at sundown.

Now, on page 38 of the Montana Magazine Book about the Yellowstone area, there is a photograph of a large clearcut in the Gallatin National Forest running right along the western boundary of the park just south of the town of West Yellowstone.

That must be several square miles, and I am wondering, Ms. Holder, if grizzly bears don't shun large clearcuts?

My understanding is that they may go to small clearcuts where they can get back into cover quickly, but that they usually wouldn't want to go into an area of that size.

Is that correct?

Ms. Holder. That is correct.

I don't think we would repeat something like this today. I am not aware of the age of this clearcut. I don't think that is a method that we would practice today.

Mr. Peterson. Mr. Chairman, I think I can give you an approximate age. I know that clearcut was there when I was in Montana in 1959.

I think it was done as a part of an attempt to control the lodgepole pine beetle outbreak at that point in time.

I think you will find also that it was not done at one time. That it was done in a successive effort to try to handle the mountain pine beetle at that time.

Mr. Seiberling. Was this an effort to prevent it from spreading?

Mr. Peterson. Yes.

Mr. Seiberling. The mountain pine beetle, I assume, exists on the park line side, too, doesn't it?

Mr. Peterson. In fact, since the park there is a little bit higher as you go in, I am not familiar with the strategy there at that time, but one of the strategies that I know we had in mind at that time was to try to prevent it from getting well established in the park where you could not take control efforts. In fact, it did become established in the park and essentially wiped out all the lodgepole pine in that part of the park.

Mr. Seiberling. Mr. Barbee—I wonder if I could ask Superintendent Barbee. Do you cut beetle infested trees in the park?

Mr. Barbee. No, sir; we don't.

Mr. Seiberling. Why not?

Mr. Marlenee. Will the Chairman yield?

Mr. Seiberling. I would like to get the question answered. Then I will yield.

Why not?

Mr. Barbee. Well, for a couple of reasons.

One, we view the pine beetle as part of the national forest rhythm, so it would be an opposition to the policies for the preservation of the park, and its resources. Then, as a practical matter, we have had experience with massive spraying programs that haven't worked.

Mr. Seiberling. Does it make any sense from the park standpoint to cut trees just adjacent to the park to eliminate beetle infestation?

Mr. Barbee. Well, I think, as Chief Peterson said, this effort took place many, many years ago, and I hasten to add that we, too, in the National Park Service were involved with substantial spraying programs over the years and consequently have ceased those activities.

Mr. Peterson. Mr. Chairman, if I could add one thing.

Mr. Seiberling. Yes, Chief, go ahead.

Mr. Peterson. We have a special cooperative effort with Canada to try to deal with the mountain pine beetle that is a major problem not only within but also outside parks but because beetle population build up in parks and then beetles moves out of parks like an avalanche.

We have a very serious question, both in the United States and Canada, as to how we deal with this.

In fact, in Canada, what they are trying to do is to put in some perimeter control around parks to prevent beetles from moving out into the surrounding area.

One of the things that they have underway is a salvage effort. This was part of the idea here. It would have taken a lot more work than was done here to be successful, and it would probably have taken work inside the park to be successful.

Mr. Seiberling. Has it been scientifically proven that by cutting the diseased trees, you have stopped the spread of the beetle?

Mr. Peterson. Yes. What we have proven many times is that when lodgepole pine gets to be about 80 to 100 years old, you build up a layer underneath the bark that is thick enough to allow the mountain beetle to overwinter. Next year you have more beetles, the next year you have more, the next year you have even more—until gradually you get an epidemic.

The mountain pine beetle is always there, but in the youngez trees with thinner bark layers, enough of them get killed in the winter that they don't build up.

Once that poplation builds up, the only way we can deal with it is to try to have a mixture of age classes of trees.

You can't spray it because the only time it is in the air where you could spray it is from the time it comes out of one tree until it goes into another one which is just a few feet away.

We did have some chemicals that we could spray on an individual tree, but they were both prohibitively expensive and environmentally unacceptable. The silvicultural approach is the only approach we now know of for treating the mountain pine beetle.

Mr. Seiberling. Mr. Marlenee, I am yielding. I still want the time.

Mr. Marlenee. I appreciate the Chairman for yielding.

Mr. Barbee, you do cut trees that threaten and endanger human lives, do you not?

Ms. Barbee. Yes; we do.

Mr. Marlenee. That is all the question I have for you.

If they are infested and they are in a campground, you do have to remove them.

Ms. Barbee. Absolutely.

Mr. **Marlenee**. If the Chairman would yield further.

Mr. **Seiberling**. Yes.

Mr. **Marlenee**. So, you are saying on a point of clarification that yes, you can control to an extent the mountain pine beetle devastation in the forest by a rotation of harvesting the trees.

Mr. **Peterson**. That is right. That is the only way we know to control it today without resorting to hard chemicals.

Mr. **Marlenee**. Some of that, as I understand it, is taken into account when you rotate your timber sales.

Mr. **Peterson**. Yes; in fact, on the flathead forest, which is also a grizzly bear ecosystem, we have a detailed plan to break up stands over time in order to maintain food, cover, and a thrifty forest, and specifically to try to make it resistant to mountain pine beetle.

Mr. **Marlenee**. And to further enhance the environment, protect the silvaculture or practice good silvaculture, protect the forest, you do it on a rotating basis on a small amount limited to 40 acres.

Mr. **Peterson**. Generally, yes.

Mr. **Marlenee**. I thank the Chairman for yielding.

Mr. **Vento**. Would the gentleman yield?

Mr. **Seiberling**. Yes.

Mr. **Vento**. I just want to point out the CRS report says it seems likely that many, though certainly not all, the National Forest Systems have direct costs that exceed the receipts, and I just want to give you the prices they gave me so you know the parameters.

> The prices have averaged nearly $17 per thousand board feet, but have ranged from less than $3 on the Shoshone in 1980 to more than $50 on the Bridger-Teton in the same year. However, the Forest Service also incurs costs to prepare and administer the timber sales; in direct timber sales costs on these six forests averaged nearly $40 per thousand board feet, although the average costs on individual forests ranged from less than $30 on the Bridger-Teton to more than $70 on the Custer.

I think the point is—this gets back to the herbicide question. We would like to have some answers, I think, for the committee on that, and maybe your response on this.

Mr. **Peterson**. Mr. Chairman, what strategy would CRS have us use to manage those forests, if you are going to maintain a healthy ecosystem including bear as a part of it?

Mr. **Vento**. This just says the cost to prepare and administer the timber sales——

Mr. **Peterson**. Much of that cost is related to doing very specific things for wildlife and for other things. It is not a legitimate cost to managing timber.

If we were managing that land for timber, we would go at it in an entirely different way.

The activities that are done here for the bear are very much below cost, too.

It costs a lot more than anybody is getting back in dollars. The question is are the benefits greater than the costs. That is what they haven't addressed.

They have not addressed benefits. I think until you can answer that question—what are the costs versus the benefits—it is an incomplete equation, because the law says we are supposed to look at costs and benefits.

We are not supposed to look at costs and receipts for 1 year. If you ask the wrong question you sometimes can get the wrong answer.

Mr. VENTO. I just asked general questions, but I think it speaks for itself.

Are you justifying the expenditure of Forest Service dollars on the basis of the other work you are doing?

It sure as hell isn't being justified on this basis alone to timber sales.

Mr. PETERSON. Mr. Chairman, the law very clearly mandates us to manage for the optimum mix. We look at all the costs and all the benefits. We would be glad to go over it with you on that basis, but you can't look at an individual timber sale and the cost without looking at the benefits.

Mr. VENTO. They are not looking at individual ones here. They are lookng at the total mix of these different forests there.

Mr. PETERSON. They are looking at the total cost and the receipt for that year.

Mr. VENTO. I know.

Mr. MARLENEE. If the gentleman would yield.

Mr. VENTO. It is the gentleman from Ohio's time.

Mr. SEIBERLING. May I suggest we have had a whole hearing on this one subject this spring, and I question whether we want to open it up at this time.

We could stay here all day just on that subject alone.

Mr. PETERSON. I agree.

Mr. SEIBERLING. Unless there is some burning question that you want to have answered, I would rather get off of that subject.

Mr. MARLENEE. I will yield to the Chairman.

Mr. SEIBERLING. Whatever you want to do. Go ahead.

Mr. MARLENEE. The facts presented in the testimony and by the Forest Service are that we could harvet timber without deficit sales if we only harvested the timber, did not build the roads, did not mitigate the wildlife or the recreational aspects.

You could harvest timber the first year for a profit.

Mr. SEIBERLING. Of course, you could do a lot of things if you don't care anything about the consequences.

Mr. Strang, I didn't see you over there. Have you had an opportunity yet?

Mr. STRANG. I appreciate the offer to speak, Mr. Chairman, but I am enligthened by these experts up here. Thank you.

Mr. SEIBERLING. Well, there are a lot of experts up here as well as down there.

I just have one other question about logging, Mr. Peterson.

This book put out by Montana Magazine has a list of the various so-called threats to Yellowstone with a portion on logging. It says:

> A recently released Targhee National Forest plan states that for areas adjacent to Yellowstone on the west, "a heavy short-term impact on wildlife habitat and visual resources will occur in order to accelerate salvage and regeneration of lodge pole pine stands killed by the mountain pine beetle". The plan notes that logging will affect 7,200 acres of Situation 1 grizzly bear habitat each year.

I wonder if you want to comment on that? Is that essentially correct?

Mr. **Peterson**. I don't know that plan that well. I do know that the Targhee has a very serious mountain pine beetle problem, and I know that they are doing some special work in that area, but I will be glad to get you the correct quote.

Mr. **Seiberling**. Let me ask you this question, then.

At some point you are going to have to evaluate the effect on the grizzly bear versus the effect on the beetle.

It is the desirability of protecting the grizzly bear versus the desirability of getting rid of the beetles. So, if you have to make that choice, which side do you come down on?

Mr. **Peterson**. We come down on the side of the bear in that case. There is no question about it.

Mr. **Seiberling**. I am glad to hear that. I hope that will be communicated to whoever is doing the actual work out there.

Mr. **Peterson**. Again, the work may enhance the area for the bear. We don't know.

Mr. **Seiberling**. That, of course, has to be factored in.

Mr. **Peterson**. That is the reason we have wildlife biologists on those staffs to help do that analysis.

Mr. **Seiberling**. Could you give us figures for the record—not today necessarily, unless you have it—as to how many miles of road are proposed for those national forests that are in the so-called ecosystem over the next 50 years?

Mr. **Peterson**. Mr. Chairman, we don't have them for 50 years. The plans are for a period of 10- to 15-years. We will give you figures for 10 years.

Mr. **Seiberling**. Thank you.

I just have one more question. The Federal agencies that have administrative responsibiliy have constantly—in the Yellowstone area—have constantly assured us in this hearing and at other times of their commitment to preserving these natural values, yet the record doesn't always indicate that that is the case.

I just want to cite one more example that gives us problems.

When Congress created the Lee Metcalf Wilderness on the northern edge of the park, we specified low vehicle use in the Cabin Creek special management area.

I think Congress was absolutely clear on that. There was a colloquy between Mr. Williams and me on the floor, and I want to read a portion of that to you, because here is what Mr. Williams said and here was my response.

He said:

> Isn't the understanding of the gentleman from Ohio that the Forest Service should not allow continual and casual four-wheeling motorcycling and other recreational vehicle use in the area, and that rather the language of the provision is very narrowly drawn to allow historic wheeled vehicular use and access for those who have traditionally driven into the area for such practical reasons as retrieving big game species legally killed during the hunting season, for search and rescue, for accessing or stocking hunting camps, or for permitted uses incidental to activities on private lands as clearing trails for outfitters?

My response was:

> If the gentleman would yield, that is the intent of the provison in question, section 2-C. This is an area that is important to wildlife migration and habitat.

We were specifically concerned about the grizzly bear habitat. Now, nevertheless, the Gallatin Forest is circulating a proposal to allow large numbers of motorcycles and other motorized vehicles into the area, and Mr. Williams and I wrote you a letter on September 23—that is more than 1 month ago—and brought that to your attention and asked you to insure that our wishes, the wishes of Congress as reflected in the legislative history, were respected. And we enclosed a copy of that colloquy. And to date, we have received no reply.

If an explicit directive in the legislative history means so little to the land managers, it may be they don't even know it exists. I don't know.

What assurances do we have that these areas are going to be properly protected, and that concerns—the considerations you have outlined—are going to be met?

Mr. PETERSON. Mr. Chairman, I responded to the letter 3 or 4 days ago.

I don't know where it is.

Mr. SEIBERLING. We don't have it yet.

Mr. PETERSON. I will see you get another copy this afternoon. We are very much aware of that colloquy. The problem I think we have is a lot of those adjectives in there are subject to different interpretations.

We have, in fact, made close a decision the area during a considerable part of the year. That decision is under appeal now, by the people who want to use the area. They think we have to go beyond what you said we should do.

Since I have to rule on that appeal, I am not going to express an opinion on it, but we will give you the letter. We are trying to be faithful to that colloquy.

Mr. SEIBERLING. I think the colloquy does make one thing clear—that we were not talkng about general ORV use in that area, that it would be limited to situations where there was a specific need, and that it wasn't going to be just opened up to anybody.

So, I hope that is the policy that will be followed.

Mr. MARLENEE. Mr. Chairman?

Mr. SEIBERLING. Mr. Marlenee?

Mr. MARLENEE. Mr. Chairman, inasmuch as I was part of the delegation that helped to draft the bill, I recall specifically some of the deliberations that we had on that particular area.

I believe it is called Cabin Creek, is it not?

Mr. SEIBERLING. Yes, right.

Mr. MARLENEE. We had no intent in the drafting of that legislation to exclude or make this an exclusive area or exclude historic—the chairman himself called attention to the historic use of the area.

Like any legislation that is drafted by human beings that cannot possibly recall, foresee, or evaluate all of the past history, we found that we did not know how significant the trail bike use was in that area, and that, in fact, there had been a lot of use, historic use, in that particular area.

So, the interpretation of what was written is subject to some question, and by the Montana delegation, I am not certain that at this day we would be unanimous either for full years or for no use whatsoever, but the compromise of the Forest Service seems to me to provide some administrative relief for those who have historically used that and we're not, again, booting somebody out of a public lands area that has traditionally used it for recreation.

Mr. SEIBERLING. I would only say the gentleman from Montana was present on the floor when that colloquy took place.

He did not object to any part of it, and therefore, that is the legislative history, not what subsequent views any of us may hold.

So, I merely think that has to be brought to the attention of the Forest Service in connection with their deliberations on that issue.

Are there any further questions?

Mr. CHENEY. Mr. Chairman, just a procedural point. I—as a member of the minority, I don't have the prerogative of scheduling and so forth, but I know we have a great many people here today.

A lot of them have come all the way from Wyoming, a couple thousand miles, to be heard. I look at the schedule and there are a lot of things I want to talk about, too, but I would hope we could work something out so we give everybody a chance to be heard.

Mr. SEIBERLING. The gentleman's point is well taken.

Mr. VENTO. I have one question. I agree with the gentleman. I hope we can get done with our work today.

Mr. Peterson—given the situation of the geothermal leasing that is up in the air—what kind of assurance can you give this committee at this hearing you will not proceed to permit any geothermal activity in the near future?

Mr. PETERSON. You have a very specific record of decision on a detailed environmental impact statement which says that the Secretary of Agriculture is withholding his consent until certain things would come about. Before a lease could be issued, it must be determined that the development would not adversely affect any of the unique thermal features of the Yellowstone National Park.

That would have to be established. I don't see any likelihood or possibility of that happening soon.

In fact, I would like to offer a copy of the environmental impact statement and suggest that the record of decision be included in the record of this hearing.

[EDITOR'S NOTE.—The above-mentioned environmental impact statement may be found in the appendix following Mr. Peterson's prepared statement. See table of contents for page number.]

Mr. VENTO. I think the summary of it would be appropriate, and I would ask unanimous consent we do that, Mr. Chairman, just a summary of it.

Mr. SEIBERLING. Without objection.

Mr. VENTO. I thank the chairman.

That is all I have.

Mr. SEIBERLING. Chief, that being the case, we thank you again for your testimony, and we will be submitting some questions for the written record and hope you can give us some expeditious response.

Questions will also be submitted to the Interior Department.

With that, I would give you the opportunity to get out of here before someone thinks of some additional questions.

[EDITOR'S NOTE.—A series of followup questions submitted by Chairman Seiberling to the Interior Department may be found in the appendix following Mr. Peterson's prepared statement. See table of contents for page number.]

Mr. SEIBERLING. We have 31 witnesses still to go. As is usual, we tend to take more time with the administration witnesses on these hearings. Hopefully we will start moving a little faster.

In order to expedite matters, I am going to ask each witness to try to limit his oral statement to 5 minutes.

We have a timer up here which we will turn on each time, so when the bell rings, they will know they have used up their 5 minutes if they haven't already finished.

If there are any people here that have to catch an early flight out, if they will let the staff know, we will try to put them on early enough so they can make their plane.

Mr. Miller, welcome.

[Prepared statements of Kenton R. Miller and Franz J. Camenzind may be found in the appendix.]

PANEL CONSISTING OF KENTON R. MILLER, DIRECTOR GENERAL, INTERNATIONAL UNION FOR CONSERVATION OF NATURE AND NATURAL RESOURCES; FRANZ J. CAMENZIND, PRIVATE ECOLOGIST

Mr. MILLER. Thank you, Mr. Chairman, ladies and gentlemen.

Following the chairman's instructions, I will not read the piece that I have submitted to the record, but will simply speak to the highlights included therein.

Mr. Chairman, I have come from Switzerland to make a statement today as a director general of the largest international federation of institutions related to natural resources management.

Many organizations in this room are members, including the federal agencies that have made presentations, and most of the nongovernmental institutions that will follow.

You will have gathered from the testimony that we presented on October 8, regarding international cooperation activities of the Department of the Interior that IUCN is a global body working in 116 countries with governmental and nongovernmental members.

Since 1948, our job has been to provide scientific and technical advice to members on questions related to ecological science, education, law, and policy, and the many other dimensions that relate to our two major areas of work; one, the preservation of biological diversity, and two, the sustainable development of our national resources.

I emphasize those two sides of our perspective. Among our regular tasks is providing the scientific and technical basis for the World Heritage Convention, the Global Biosphere Reserve Acts plan, and a variety of other activities that the United States is a participant in and that relate to the subject before us today.

I will not repeat here to a group that well knows far better than I the values and the importance of the Yellowstone area, the Yellowstone ecosystem, the national park.

What I would like to stress, Mr. Chairman, ladies and gentlemen, is from an international perspective, what is going on in this room is very important.

I might add, as a side point, that it is a pleasure to be in a room and in a country where we have a democratic process taking place.

I don't normally have the pleasure to have such a dialog and a debate on a topic of this significance. The United States initiated an event called the national park.

It has become one of the best exports of this Nation. There are now 3,500 such areas in the world, and if we add the national forests and the wildlife refuges we are up slightly over 6,000 area.

We are talking of more than 450 million hectors of land devoted to a variety of benefits to people and to the maintenance of biological diversity.

This is the largest single land management enterprise in the world.

The United States followed by creating a truly international dimension to this called the World Heritage Convention.

This meant that not only are these areas dedicated to the welfare of the people of a nation but to all nations.

It also carried a rider that no other treaty or convention has, and that is we shall share in both the costs and the benefits.

The United States put Yellowstone forward in the very first act of setting up the World Heritage.

The world continued to see this as a U.S. position of leadership. The United States then doubled the size of its National Park System when it set aside series of areas in Alaska, similarly with the national forest in the other public systems.

In that same decade, the world followed suit, doubling the acreage worldwide and the number of protected areas.

In this country, the first two world conferences on national parks was celebrated in 1962 and in 1972.

What is interesting is that the third was held in a developing country, Indonesia, 1982 on the island of Bali.

There we saw a different perspective. We saw a poor nation, a large nation, a nation of hundreds of islands and in many languages saying we, too, can do our part to make sure that the species we inherited, the wealth of the planet we have in trust, can remain available.

At the same time, we can take care of the benefits of our rural people.

Out of that meeting which was well attended by American institutions as well as those around the world, 1 of the 10 key recommendations contained in the Bali action plan urged all nations—now somewhat proud to say we have so many protected areas—to remind themselves that the job isn't anywhere near finished, that all of these areas are dependent upon ecosystems or areas often much larger than the parks themselves for stream flow, energy flow, and a variety of other natural processes that must be looked at carfully and properly managed if the key areas, the critical sites, are to remain in the long run.

One of the fundamental principles, Mr. Chairman, of that world gathering of professionals from the forest, park, and wildlife fields around the world, was that whole lands and waters within these ecosystems be treated in ways which preserve those areas which need the most care and at the same time husband remaining areas to ensure that all resource productivity is sustainable.

Bali also recommended that protected areas management be envisioned broadly to link parks, forests, sanctuaries, and other types

of reserve lands to create ecosystemwide schemes of cooperation to meet the many goals of people while protecting nature and natural resources.

The World Conservation Strategy, published in 1980 and released in this country as well as in other major capitals around the world, called for regional and integrated efforts to overcome obstacles to conservation and sustainable development.

The United States and Canada took steps again in a pioneering fashion in the direction of ecosystem management by making a joint nomination of the Wrangell-St. Elias/Kluane Sanctuary areas as the first international heritage site.

That model is being followed presently in Latin America and Africa.

Mr. Chairman, there are three major sites which I will not discuss in any detail now, just to mention them, where similar experiences is being lived today as we are in Yellowstone.

The Serengeti of Tansania with its neighbor, Kenya, the greater barrier reef of Australia, and the Wadden Zee—that is the giant wetland of the Federal Republic of Germany—the Netherlands in Denmark—these areas share in common a tremendous scale, the complexity of the natural system.

They have migrations or movements of animals. They have complex jurisdictions among public institutions. They are all related to World Heritage, and they have all created some form of consultative mechanism involving scientific advice and some kind of relationship to both governmental and non-governmental institutions, and citizen participation.

In hindsight, Mr. Chairman, we now recognize that ecosystems simply are not square. They are interlocking living systems of energy and nutrient flow interacting with the physical and living environment.

In Australia, Costa Rica, Czechoslovakia, East Africa, India, Indonesia, and Peru, as well as in some other countries, we see cooperative programs being established to deal with ecosystem management.

Partnerships, Mr. Chairman, not battle lines, are needed to perpetuate natural systems. The world is interested in what goes on in this session, and I am convinced the local citizens living around the parks and the forests and the sanctuaries are also very concerned about their livelihood.

The question I would like to ask from the world community to this distinguished gathering is will the United States once again show leadership in meeting what may well be one of the greatest challenges to conservation of nature and natural resources in the decade to come.

The results of this exercise will influence human welfare and conservation everywhere.

Thank you, sir.

Mr. SEIBERLING. Thank you. Dr. Camenzind.

Mr. CAMENZIND. Mr. Chairman, members of the subcommittee, my name is Franz Camenzind. I am a private ecologist living in Jackson, Wyoming. I appreciate the opportunity to speak to you today about the Yellowstone ecosystem. I would like to take a few minutes to talk about ecology, ecosystems and ecosystems management. I have heard quite a few questions.

Mr. SEIBERLING. You have 5 minutes and you can cover any subject you want if you can cover it in 5 minutes.

Mr. CAMENZIND. I am not sure I can cover any of these subjects in 5 minutes. Ecology literally means a study of the house or the place where an organism lives. That includes the soil, the water and the climate and that is what the word econogy means.

Ecosystem refers to the workings, the dynamics of this situation, the interreltionships of all of the parts. Thus, an ecosystem is a living, dynamic, changing entity and these are new terms. Some of these words and concepts have been around for scores of years and in some cases hundreds of years.

Certainly ecosystems themselves have been around since the beginning of the planet. We haven't created an ecosystem and I don't think we ever will be able to. What we are trying to do here is identify, recognize and appreciate an ecosystem. Since ecosystems are dynamic systems. The key element here is interaction and interactions are important, particularly if you have a lot of components in the ecosysem and the more components you have, the more complex the system becomes.

Generally speaking the more complex a system the more stable it is. If you have one or two entities within an ecosystem a minor disturbance can initiate an incredible change in that ecosystem put if you have thousands of entities a disturbance on one or two of those pieces will not have as great an effect on the overall ecosystem.

With the Greater Yellowstone Ecosystem we have what is basically the largest relatively complete ecosystem of its kind remaining in the world. It is very complex. It has a lot of interactions. The ecosystem itself occurs within an area that I refer to as the Greater Yellowstone region.

If we look on this map over here to my right we can see that the hard outlined green colors represent basically the timber covered areas and beyond that we get into some color changes but the region is very large and the ecosystem itself is a part of that.

As we have heard this morning and all through the day, it is difficult to draw exact boundaries because we don't know where all of these interactions cease or where interactions between dissimilar groups are not very great.

We can look at this map and get a pretty good feeling for the area we are talking about but this is where the inherent order of the area breaks down because over this map there are some 25 different political jurisdictions and these political jurisdictions as we just heard, generally do not follow ecological boundaries.

They are square, whatever kind of lines. In fact, the lines that initiated Yellowstone Park were lines determined by number of miles from shores of the lake. They really had nothing to do with the living components of the area itself. So what we have done is put an artificial system over an ecolgical system and tried to manage it that way, and quite frankly, that is not a good way of managing an ecosystem.

To try to break this down and figure out where ecosystem might occur, ecologists have broken the system itself down into smaller pieces. First of all, everything occurs, ever living thing occurs as a species. All species exist as populations of closely interacting species constitute a community.

The community interacting with the non-living components in the environment, that constitutes the ecosystem. So we try to break it down and recognize all of the components. One of the problems that we are having and I can give you another example to the one on the discussion of the geothermal features is birds that migrate out of this area in the wintertime.

Obviously at this point in time we cannot have their winter range part of that ecosystem so we have to draw some lines somewhere where we can deal with it in a politically manageable situation.

The same situation occurs with elk that move from summer to winter range. For the most part that all occurs within the area of this map but still those pieces of ground that those animals move across and require for portions of their life a part of that ecosystem.

Politically as I say, we cannot accept all of these areas at this moment for consideration of the ecosystem meaning the areas in the southern states for bird migration and so forth. So we have to draw a line somewhere. I think the key thing to remember is this concept of interactions, the number of interactions and the type of interactions between species.

Biologists and ecologists alike consider the genetic exchange within a population and between adjacent populations of the same species to be one of the most important long-term interactions that we can consider, in other words, the size of the general pool, the gene variability. The bigger the population the more chance you have for genetic variability.

With that the species that has the largest gene pool is most capable of responding to changes in the environment whether they are man caused or natural. Another type of interaction that is equally as important as the interaction that comes about with genetic variability is the interaction called competition. It is competition that has shaped the species into what they are now. What we have is the survival of the fittest and it is competition between elk and grizzlies, elk and wolves, elk and deer, and so forth.

All these things have played a selective pressure on these animals over thousands of years of evolution. These are the types of things that we have to keep in the system in order to maintain the viability of these species, the long-term viability.

So many of our concerns are based on 5 years, 10 years down the line. We are talking about viability for literally centuries because the decisions we are making today can have these types of effects. Unfortunately in many cases managers, biologists, ecologists, whathave-you have not been able to replace the types of competition that occur naturally with managed competition.

In other words, we have not been able to improve on Mother Nature in most cases. We can't go in and put the same types of selective pressure on these species that the other species in the climate and the environment has done. So in the Yellowstone ecosystem we have an opportunity to approach this management not on a species by species basis but on an ecsystem basis. One of the things that is also unique about this is not ony its size but the variation that occurs within it.

Altitudes from 5,000 to 13,000 feet, habitats with temperatures that go regularly at 60 below zero to 200 degrees above zero, all of these things will have unique to the area. We have three major river systems peaking out in this area. This is the headquarters of our nation as far as I am concerned and with that the plant species that still exist represent a very diverse set flora. Species that come from the plains, from the northwest, from the Great Basin, from the Rocky Mountains, it is an incredibly unique rich system and that in itself would be enough reason to give it the type of attention that I believe it deserves on a management basis.

Mr. SEIBERLING. Mr. Camenzind, we have already used up 8 minutes and I have finished reading your written statement. I wonder if you could wind it up?

Mr. CAMENZIND. I can do that very rapidly. I was just about at the very end. I think the thing we have to remember here is that ecosystem does exist. It is not soemthing we have just created and it has all of these parts working pretty much on their own at this point, and if we get ourselves back into more of a corner and end up managing more of this, in other words, pulling strings here and there, we are going to be obligated down the line to continue to pull more strings.

The system can take care of itself if we let it but if we insist on putting our fingers into we are going to have to keep doing that. It is going to become more complicated. Thank you.

Mr. SEIBERLING. I am going to read the paragraph you didn't read because I think this is the core of your statement. Because our knowledge of the ecological requirements of many of the species present in the greater Yellowstone Ecosystem is incomplete, the boundaries for the ecosystem must remain vague.

The most important point to remember is that an ecosystem must contain all the elements required to perpetuate all species indigenous to the area. Our research efforts should be directed toward identifying these requirements. Only by having this information can we clearly identify the boundaries of the Greater Yellowstone Ecosystem. In the interim, if we err, we must err in favor of the resource by concerning ourselves with too large rather than too small an area.

Isn't that really the bottom line?

Mr. CAMENZIND. That is correct.

Mr. SEIBERLING. Fine. I have no questions. I think both witnesses have made excellent statements. Does anybody have any questions?

Thank you very much. We appreciate it. We will try to follow your advice.

Mr. SEIBERLING. At this time, I am going to put one person ahead of the next panel. I understand Mr. Harry Roberts on panel 9 has to leave by 5:00 p.m., so we might as well put him on now if he is here.

Mr. Roberts.

[Prepared statement of Harry Roberts may be found in the appendix.]

STATEMENT OF HARRY ROBERTS, EXECUTIVE DIRECTOR, WYOMING HERITAGE SOCIETY

Mr. ROBERTS. Thank you, Mr. Chairman.

I would like to appreciate your—I have a plane to catch, and I will be within the 5 minutes that you talk about. Every time I look at the clock, I have to take out another paragraph.

I am Harry Roberts. I am executive director of the Wyoming Heritage Society in Wyoming. We are a membership organization approximately of 1,200 members.

We are also a public interest organization, and our primary function is to provide information and facts to the people of Wyoming on the issues.

One of our concerns is multiple use on public lands. I would like to come at this from a different approach today and just a moment of review.

Wyoming is one of the 12 major public lands states where 92 percent of this Nation's public lands are located, 729 million acres. Forty-eight percent of the surface of Wyoming is Federal lands.

Yet, that Federal land produces more than 60 percent of Wyoming crude oil production, 80 percent of Wyoming ranches have leases on public lands, approximately 90 percent of Wyoming's timber comes from public lands and an estimated 95 percent of our tourists come to Wyoming and go to either Teton National Park or Yellowstone National Park, which of course is public lands.

I think in Wyoming we well recognize that the public land in our State belongs to all the people in this country. But I would bring to your attention or make the point that our economy depends upon those public lands, literally, the majority of agriculture in Wyoming depends on public lands, and as I have listed some other major economic issues are dependent on the land.

I would mention to you that we have talked today about buffer zones and when we think in terms of the Greater Yellowstone Ecosystem, we think in terms of the map created by the Greater Yellowstone Coalition and there we look at what might be, of course, new perimeters around Yellowstone as far as management is concerned and the expansion would be from approximately 2.2 million acres to 8.25 or somewhere in that area.

I think if you look back at Public Law 95-550, which was passed in 1983, the Wyoming Wilderness Act Section 504 states that the Congress does not intend that the designation of wilderness areas in the State of Wyoming will lead to the creation of protective perimeters or buffer zones around each wilderness area.

As we have talked today, the north, east and south sides of Yellowstone Park are wilderness areas. I would make that point because it would seem to us that we would be contravening the intent of Congress if we do establish some management perimeter around the park such as the greater Yellowstone ecosystem.

Our belief in Wyoming, and it is a new belief, proposes that Wyoming should have a planning responsibility equal to that of the Federal Government on public lands within the boundaries of Wyoming. Not only should the State be involved in the planning process but there must be an oversight of the State's intent as in connection with the users on Federal lands.

We individualize in our organization that is to be done by a commission established by the State legislature. That planning commission would be made up of not only the users but also the representation from the public and State agencies.

The commission would be concerned not only with planning on lands under the jurisdiction of the Department of Agriculture, but also those lands under the Park Service and the BLM.

We think this is not an unreasonable idea. I think that in your State, Mr. Seiberling, if you recognize that 48 percent of the surface of Ohio is under the control of the Federal Government, under the management of the Federal Government and under the planning responsibility of the Federal Government, you would be equally concerned that perhaps the people of Ohio would have some kind of planning responsibility.

Recently, the Shoshone National Forest printed its proposed land and resource management plan; that is east of Yellowstone, for an area equal to two-thirds the size of Connecticut, four times the size of Rhode Island, yet totally enclosed within the State of Wyoming, and there wasn't one single page in the thousands of pages in their proposed management plan other than the draft EIS that was official Wyoming position in relation to those particular lands.

I think that what you run into there is a cumulative impact as a result of Federal planning on Federal lands, whether it is on the national forest lands or BLM lands, that is not taken into effect.

It is true that whether you are talking about the National Forest Management Act or the Federal Lands Policy Act, that there is supposed to be input from the States or made available from the states, and we have found, for instance, in this Shoshone National Forest plan that two agencies of the state were consulted but there is no official state input that takes into consideration the composite impact of that forest plan, plus another plan on the economy of Wyoming.

Again I come back to the point that 48 percent of our surface is Federal lands and our economy depends on that Federal land. I think, of course, as you know—I didn't make it, did I?

In conclusion, I have a half a paragraph here. In Wyoming at the present time the oil and gas business is at the bottom. Wyoming agriculture faces an economic crisis. Travel to Yellowstone reached a peak in 1978 which has never been exceeded since.

We think that this is not a time to perhaps jeopardize Wyoming jobs and jeopardize the policy of multiple use and sustained yield in our national forests around the park by extending a perimeter or proposed ecosystem in that area.

Mr. SEIBERLING. Well, thank you, Mr. Roberts.

I wonder if you recall the suggestion that the Chief made, Chief Peterson, as to his ideas for adding to the coordinating group which the Forest Service has already established and which represents the local governments in the Greater Yellowstone area.

Mr. ROBERTS. I don't think that is exactly what we have in mind. The law, the planning laws say that the Federal agency shall consult with State agencies, but really what needs to happen in the major public lands States is there must be some type of Wyoming Federal lands planning commission which the State would notify these Federal agencies that that was the commission they would deal with, and for the first time, Wyoming would have some kind of a policy input into the planning process.

Mr. SEIBERLING. I think that is a very good point, frankly, and I think we ought to give that some consideration.

Do you see anything wrong with the idea, though, that the various Federal agencies that operate the park and the parks generally, the National Forests, wilderness areas, the wildlife refuges, mineral leasing, shouldn't have some kind of collective structure for coordinating their decision making?

Mr. ROBERTS. No, sir; I would have to agree with that.

Mr. SEIBERLING. That is all that has been suggested today, really. No one is suggesting creating buffer zones.

To the extent there is a buffer zone in existence, it is the wilderness areas themselves that provide the buffer zone or rather larger habitat zone for the wildlife in the park.

So anyway, I appreciate having your testimony. I think you have made an excellent contribution. Thank you.

Mr. Cheney.

Mr. CHENEY. Thank you, Mr. Chairman.

I simply want to thank Mr. Roberts for coming before the committee. He is one of our State's more distinguished citizens, a friend, and it is nice to have him willing to devote as much time and effort as he does to all these issues.

I would like to thank him for appearing today.

Mr. SEIBERLING. Mr. Vento.

Mr. VENTO. I have no questions. Thank you.

Mr. SEIBERLING. Thank you very much.

Mr. ROBERTS. Thank you very much.

Mr. SEIBERLING. We will proceed with panel No. 3: Mr. Bob Anderson, executive director, Greater Yellowstone Coalition; Mr. William Turnage, president, The Wilderness Society; Mr. Paul Pritchard, president, National Parks and Conservation Association; and Mr. Chris Duerksen, senior associate, Conservation Foundation.

[Prepared statements of Bob Anderson, with attachment, William Turnage, Paul Pritchard, with attachment, and Chris Duerksen may be found in the appendix.]

PANEL CONSISTING OF BOB ANDERSON, EXECUTIVE DIRECTOR, GREATER YELLOWSTONE COALITION; WILLIAM TURNAGE, PRESIDENT, THE WILDERNESS SOCIETY; PAUL PRITCHARD, PRESIDENT, NATIONAL PARKS AND CONSERVATION ASSOCIATION; AND CHRIS DUERKSEN, SENIOR ASSOCIATE, CONSERVATION FOUNDATION

Mr. SEIBERLING. Welcome, gentlemen. Sorry to put you under the 5-minute rule, but you'll see what time constraints we are under when we try to speak on the floor of the House. We have to follow that procedure of necessity.

Mr. Anderson.

Mr. ANDERSON. Thank you very much, Mr. Seiberling.

Thank you very much for the opportunity to be here today and to share with you the views of the Greater Yellowstone Coalition. Thank you for recognizing the importance of the Greater Yellowstone Ecosystem and the potential seriousness of the problems it faces.

I have submitted by testimony for the record. In the interest of time, I will summarize a few excerpts from it.

I am Bob Anderson, executive director of the Greater Yellowstone Coalition, and I am a civil engineer who grew up in Livingston, MT, on the northern fringe of the Great Yellowstone Ecosystem, 50 miles from the northern border of Yellowstone Park.

The coalition is an alliance of 43 conservation groups nine of which are national groups, all of which are deeply concerned about the future welfare of the Greater Yellowstone Ecosystem.

The coalition was formed to respond to the general subject of the hearing today. In our opinion, the ecosystem approach to resource management is a very logical and sensible approach to land management. From it would accrue many benefits, among them wildlife benefits, sustained yields of timber and forage, recovery of threatened and endangered species, economic stability through the marketing of the Greater Yellowstone Ecosystem's principal economic product or industry, which is tourism, and not the least of which is water, which benefits municipalities, industry, agriculture, fish, wildlife, and recreation in the northern Rockies.

In our opinion, however, the future of the Greater Yellowstone Ecosystem is somewhat threatened and we have prepared about 1 year ago a catalog of the so-called threats to the Greater Yellowstone Ecosystem, which I would like to submit for the record upon completion of this panel.

This list of 88 so-called threats includes management issues and proposed developments in the Greater Yellowstone area.

We believe the cumulative effects of all these issues and all proposed developments poses a serious situation for the Greater Yellowstone Ecosystem.

We also believe that the ecosystem is poorly placed with respect to its management agencies, that the 25 or 30 different local, State, and Federal agencies are poorly equipped to make the difficult decisions required in order to preserve the area's important environmental and other values and at the same time recognize the importance of local economies and the continued existence of a number of industries such as we have in the area.

A lot has been said about coordination of those agencies today. Mr. Peterson is of the opinion that the Greater Yellowstone area is the most coordinated place in the world.

Unfortunately, that is not necessarily good news for a couple of reasons. One is that the coordination described by several agencies this morning, in our opinion, has done less well than we have been led to believe.

I can offer a few examples. One of them is forest planning where the development of one forest plan simply does not recognize forest planning in another forest, let alone what happens in the adjacent parks or adjacent private or State lands.

As a result, the forest plans, we believe, are not well coordinated and do not take into account the important role of each of the forests in the Greater Yellowstone system.

Another reason that it is not necessarily good news that the ecosystem may be well coordinated is that coordination may well not be sufficient, that is, communication and understanding may not be sufficient in order to preserve Yellowstone's important resources.

It may well be necessary for the Federal agencies to have more stringent requirements with respect to their decision making, and in place of coordination, what may well be needed is the need to change some decisionmaking and planning.

We have some specific recommendations which I would like to present from my testimony.

First of all, we think it is important for Congress to recognize the potential seriousness of the Greater Yellowstone problem and to conduct an independent inquiry.

Second, we think more information is needed about the Greater Yellowstone ecosystem and that a reputable body such as the National Academy of Sciences should be asked to develop a sound defensible scientific description of this ecosystem so that land managers from the local to Federal levels will be able to understand the parameters important to its management.

Third, we think Congress should ask the Federal agencies involved in the Greater Yellowstone ecosystem to review their planning and decisionmaking actions and ask the questions of themselves, to what extent do they conform to an ecosystem approach, and what improvements can be made under the current institutional framework?

I would like to support Mr. Peterson's suggestion for expanding the coordination by establishing a Greater Yellowstone coordinating committee.

However, we recommend that that committee develop and recommend to the Secretarys of Agriculture and Interior a memorandum of agreement which would describe and charter their activities.

Second, we suggest that that committee develop a set of evaluation criteria so the effects of their coordination can be measured over time so that we can determine over time whether or not their efforts are sufficient.

Four, we think Congress should begin the process of developing legislation and we think that legislation that is considered ought to have a couple of key elements, the first being commitment of Federal agencies to a mission of preserving and protecting the health of the Greater Yellowstone ecosystem, and second that there be considered a system of integrated management which would hold the agencies accountable for their management.

In summary, Mr. Chairman and members of the committee, we think that the Greater Yellowstone ecosystem is in relatively good health despite the intense human activity in and around the area over the last 100 years or more. Despite that good health, it faces an uncertain future and we would like to maintain that good health.

Simply put, if it ain't broke, don't break it.

Thank you.

Mr. SEIBERLING. All right, thank you.

Mr. Marlenee has to catch a plane and would like to ask a couple of questions.

Mr. MARLENEE. Yes; thank you.

I welcome the distinguished panel and apologize for having to leave on the airplane.

Bob, I would like to stick around and have a little fun, but I do have two questions to ask you, two quick questions, and then I would yield back the balance of my time for you specifically, if the chairman so chooses, because I know that you have looked at the principal problems a long time.

Is it your intention, being the Yellowstone Coalition, to impede, block, obstruct progress or recreation on private lands surrounding the park, or to support legislation that would do that?

Mr. **Anderson**. No; we have no such intention. We think there may well be problems on private lands and we propose those problems be addressed either at the local level by local government or by private interests—for example, private conservation groups.

Mr. **Marlenee**. But yet you have been involved in the dumpster controversy at west Yellowstone.

Mr. **Anderson**. That is correct, and I think that is an example of a private approach to a serious problem.

Several entities—Burlington and Gallatin County and the State of Montana—generated money for the solution of that problem.

Mr. **Marlenee**. On the one hand, we would not involve or impede or block or obstruct recreation or progress, and yet, on the other hand, you are saying we are going to step in if that is necessary.

Mr. **Anderson**. I guess I don't follow your question.

Mr. **Marlenee**. I asked you specifically about the dumpsters.

Mr. **Anderson**. Yes. We think dumpsters are a serious problem in west Yellowstone because they lure grizzly bears into the community and we don't think that is in the interst of the bears or the community, so we participated in the efforts to raise money from local and private sources to pay for bear-proofing the dumpsters.

Mr. **Marlenee**. Second, do you—and it sounds as though you propose super legislation that bypasses all agencies' existing authority.

Mr. **Anderson**. No, we have not suggested that at all. We think that this problem is serious enough, however, so Congress ought to begin the process of exploring alternative solutions, one of which is legislation which would direct the existing agencies to——

Mr. **Marlenee**. Alternatives, Bob, to the existing authorities that they have to coordinate, evaluate or control and regulate?

Mr. **Anderson**. I think I——

Mr. **Marlenee**. Alternatives to that?

Mr. **Anderson**. I think those alternatives should be explored, yes.

Whatever alternatives are identified, it is important they have there at their core the notion of a commitment to the mission of protecting the place and also some accountability.

Mr. **Marlenee**. Thank you, Mr. Chairman. I yield back whatever time I may have.

Mr. **Seiberling**. Thank you.

All right. Let's proceed with the testimony.

Mr. Turnage.

Mr. **Turnage**. Thank you, Chairman Seiberling and Chairman Vento.

I would like to say on a personal note that this will be my last appearance before the committee as president of The Wilderness Society. I am stepping down from that position at the end of December.

I would like to say that in my view this committee has accomplished more for the public good in the last half dozen years than any other in the Congress, and certainly the accomplishments have been more permanent than those of any other.

It is an honor for me to work with the committee, and particularly closely with you, Mr. Seiberling, and I thank you and I salute you.

In the interest of bipartisanship, I would like to say that I think Mr. Cheney is the most intelligent man I have ever met with whom I disagree on nearly everything.

And if I can add one more disagreement to the record, it would be the question of who has spent the most time in the Greater Yellowstone ecosystem particularly on foot or on skis.

There are many threats, indeed, to this great park and ecosystem, which I believe is the most visible symbol of American culture, history and values, and arguably, the best known land form anywhere in the world.

But I think the key point, and Mr. Cheney has raised this several times, is that the condition of the ecosystem, with the exception of the bear, is pretty darn good today.

The real concern is about the future, about the next 50 years and the next 200 years, and about what science, ecology, biology are beginning to tell us about that future, and what the Park Service's 50-year plans are beginning to tell us about that future.

I think it is fair to say that The Wilderness Society's view is that the single greatest threat posed to the Yellowstone ecosystem and the great bear is the U.S. Forest Service and its 50-year plans. It is indeed ironic that the greatest threat comes from our own Government. We are afraid that Smokey the Bear will kill Grizzly the Bear.

I must say the statements by Mr. Mott and Mr. Peterson earlier today were, in our view, entirely inadequate. I was surprised and disappointed to have that reaction to Mr. Mott's statement after the srong public remarks he has made about the Yellowstone ecosystem at the outset of his tenure as director.

I think the interagency committee may be a small step forward, though I think we already have one, the coordinating committee founded in the 1960s, of which Chief Peterson spoke. But having bureaucrats gather periodically to discuss affairs is of little significance if the underlying role of one of the two key agencies is not changed.

The Yellowstone Park, I think we all agree, is very, very special indeed. Seventy percent of that ecosystem is in the national forests.

Why then do the U.S. Forest Service's 50-year plans now in process propose major incremental, long-term increases in timber cutting, in road building, and in oil and gas development?

The Wilderness Society believes that the Forest Service is an agency somewhat overwhelmed by its own historic pattern of timber cutting and road building. In some places, timber cutting and road building are appropriate uses. The Forest Service predilection for applying this timber and road obsession to every area including Yellowstone is foolish and potentially tragic.

They project a level of timber cutting and road building in the next 50 years that would devastate the ecosystem and the bear in our view. For example, for over 50 years the total road mileage in the forests and ecosystem is projected to grow to as much as 20,000 miles. That is about half the total mileage in the entire U.S. interstate highway system.

The deeper irony is that the Forest Service is losing substantial amounts of taxpayer dollars on its timber sales in the Yellowstone forest. That is to say, the cost of planning and managing the sale, building the roads and reforesting, all costs borne by the Government, greatly exceed the returns from timber sales.

So the American taxpayer is subsidizing the destruction of the greatest wild ecosystem we have left outside of Alaska. I have to ask why.

A distinguished Senator once termed this practice "idiotic forestry." Why should it be allowed to destroy the Yellowstone Ecosystem?

If you look at it from 1, 5, or 10 years, it doesn't look so bad, but what it adds up to after 50 years, it is absolutely overwhelming if you map that out.

The Wilderness Society calls on the U.S. Forest Service to change its priorities, to make ecosystem protection in the Yellowstone its highest value rather than taxpayer-subsidized commodity production.

The Forest Service plans have not been prepared in harmony with either the Park Service or among the forests themselves. The Forest Service does not practice ecosystem thinking or planning. Indeed, Chief Peterson said the ecosystem concept is, and I quote, "a grandiose solution to solve a rather simple problem."

This attitude by a high Government official is more than distressing; it ignores science, ecology, reality, and the broader public interest.

Mr. Chairman, it is time the U.S. Forest Service stopped using taxpayer dollars to assault the Yellowstone ecosystem and its great bear.

Thank you.

Mr. SEIBERLING. Thank you.

Mr. Pritchard.

Mr. PRITCHARD. Thank you.

It is a pleasure to be here and make a presentation on an issue that deserves our attention. Certainly, the time of all of us here, even though this day would seem long, it is worthy of this devotion and concern.

If I may, I will submit my testimony for the record and just summarize it.

Mr. SEIBERLING. Without objection, the prepared statements will be included in the record.

Mr. PRITCHARD. Thank you, sir.

The Yellowstone is a complex and yet delicate webb of landscape and life. Our concern today is the consequences of the management of that webb of life and landscape.

With over 24 different political and administrative jurisdictions to manage an area, we would like to respond in our testimony to the question of how well we as public agencies or public agencies in this country and all the other entities have properly carried out the mandate that you as Congress established when you established the first park in the world, Yellowstone.

It seems to me that that is the only reason why we are here today. This consequence of the recognition of Yellowstone were borne out by the world itself in 1974 as an international reserve, and in 1978 as a designated world heritage site. As far back as 1917, E. W. Nelson, chief of the U.S. Biological Survey, pointed out the land designated as Yellowstone was inadequate to carry out the mandate of Congress.

My statement and his statement is on page 2 of my testimony. I would like to draw your attention to his final conclusion. He said, "We must guard all the wildlife carefully, for once destroyed, we cannot bring it back."

The concern in 1917 was that we had not properly protected, in the designation of the boundary, the basic core, the heart of Yellowstone, and that is the winter habitat for elk and other wildlife.

Specifically focusing on the Forest Service, five units all preparing comprehensive forest plans, we have heard them and their concerns. One area that we are particularly concerned about is the Kersey-Fisher timber sale, an area located in situation one grizzly habitat, the most critical habitat, and situation two. It is within or adjacent to existing and potential wilderness areas and the timber sale is in critical riparian habitat.

Again, we support the comments of others that little, if any, concern was given to the wildlife. Of course, we all know, as was pointed out, that the grizzly roam throughout the entire area no matter what the activities are and are limited by such activities and timber sales and other actions of the Forest Service.

We commend the interagency grizzly team's work but we think it is limited too much to just research. We think it has to take into consideration the impact of the timber sales and other efforts, camp grounds construction, efforts of the Park Service, which we think have also been deleterious to this important world resource.

Specifically, wildlife concerns we have, with elk, we still have not protected their entire winter habitat. There are still private lands and other resources not protected properly.

The bighorn sheep once roamed the entire resource and today there are less than 125 left, and I think they are endangered in the truest sense, as are the grizzly. They are isolated in small areas and it may be questionable as to whether they can sustain themselves.

The bison, fortunately some 2,000 strong, are surviving, and yet they seem to be now carrying the stigma of causing brucellosis from the State of Montana, something that has not been documented but something which can allow the State to destroy the bison if they interact with the cattle.

The moose again are suffering, and suffering from human interaction and poaching from the construction of development in their very habitat.

The trumpeter swan, another indication of man's lack of foresight in this very important area, the trumpeter swan are diminishing and they may not be able to survive under the management of man.

Other actions include geothermal leasing. I would just say, Mr. Chairman, that Yellowstone is one of 10 major geothermal regions of its type in the world. Seven of the 10 have been lost in the last 30 years because of improper development for geothermal, or destroyed in some fashion or manner.

I don't believe that we have the right for this and future generations to bring about such changes.

Mr. Chairman, that brings us to our concern, and that is with that designation of an international biosphere reserve. We believe this area should be managed as an international biosphere reserve.

There is no need for legislation or other action. It simply means bringing together existing park units and the two refuges and make those the core area as is proposed under an international biosphere reserve program sponsored by "Man and the Biosphere" and interconnected with 243 other biospheres around the world.

We would encourage the Forest Service to cooperatively manage its resources so that it does not detract from the basic wildlife resources for which Yellowstone was established.

I would conclude that it is conceivable that we will be left with a skeleton as we will have Yellowstone but not have the heart.

I think that is what we are all concerned about here today, and we may have a balanced system or a system that is surviving today, but I don't believe we can assure you that the congressional mandate established in 1972 will be a reality in 10, 20, to 30 years.

Thank you, sir.

Mr. SEIBERLING. All right. Thank you.

Mr. DUERKSEN.

Mr. DUERKSEN. Thank you, Mr. Chairman.

I am Chris Duerksen. I am a senior associate at the Conservation Foundation here in Washington, DC. We appreciate the opportunity to be here to testify on this important issue, and wish to commend both the subcommittees for holding these hearings.

The foundation is a nonprofit policy research group. As I said, we are in the District of Columbia. We were founded in 1948 and we are dedicated to improving the quality of the environment and promoting wise use of the Earth's resources, both natural and manmade.

We emphasize action-oriented research to influence policy. And in that role, we recently published a book, which I coauthored, entitled, "National Parks for a New Generation," which was the result of 3 years of research, and I would like to share some of the observations that came out of that research regarding Yellowstone Park.

Before I do that, I would just like to mention quickly some personal experiences I have had in Yellowstone because I do think it is easy to lose sight of just how great a place this really is and in what good shape it is in many ways when we are in the midst of discussing problems and Government programs to address those problems.

It was in the upper Yellowstone River that I first heard elk bugling, a sound that captures the essence of the wilderness. It was here that I caught the biggest trout I ever hooked, a 2-foot-long cutthroat that inhaled a tiny size 22 dry fly.

I hasten to add since Superintendent Barbee is here, I released that trout in keeping with park regulations. Also, in keeping with angling traditions, I will not tell anybody where I caught it.

I could go on and on about my deep feeling for the place. It really is a national treasure and rightfully the flagship of our park system.

It is more important to me now than ever. My wife and I just had our first child, a little boy, and I hope the place remains that way so when Benjamin and I go out there; when he is 20 I can stand in that stream with him and catch the prodigy of that cutthroat I caught a year or two ago. I hope I am able to tell him—I think I will—that there were a bunch of wise men back in Washington 20 years ago named Weaver, Udall, Vento, Seiberling, Hansen, Cheney, and others who protected——

Mr. SEIBERLING. How about Strang?

Mr. DUERKSEN. Sorry—Mr. Strang. I have a long list, but you restricted me to 5 minutes.

In any case, I hope it is there 20 years from now.

Despite the outward appearances that everything is fine, that Yellowstone is indeed under great stress. I am not going to go into the details. People have done that far better than I.

But I saw it firsthand when I was back in the Thorofare Wilderness area a couple years ago and the rangers warned this was the bear capital of the United States. I was there for 1 week and I didn't see, smell, or hear anything that looked like a grizzly. I was disappointed. I didn't want to see any up close, but I wanted to see one.

I found out later during this research that because of intrusions on the natural range and questionable management policies, those bears were in trouble.

How are we going to deal with these serious pressures on the park?

The buffering of the adjacent forest offers insufficient protection. We have heard about the threats; we discussed them in the book. I think they will grow worse.

How should we respond?

I think it is important to keep in mind that Yellowstone has always been at the forefront, on the cutting edge of innovative solutions to administrative and management problems facing the Park System.

In the early days of the System, park officials grappled with a tough problem of poaching. Almost a half century later, in the 1960s, the Service killed thousands of elk to deal with a larger herd of animals triggering a seminal study of wildlife management in the parks. In the 1970s, a father's fatal fall into the Old Faith Geyser catalyzed the drive to have visitor protection throughout the parks.

Today, the struggle to save Yellowstone's grizzly bears symbolizes the Park Service's strength and commitment to resource protection and natural resource system management.

We believe Yellowstone can serve as a national model in dealing with problems in all parks. There are clear plusses in the Yellowstone situation.

First of all, the Greater Yellowstone ecosystem is on Federal lands for the most part, thus making remedial measures easier, at least in theory. Also, the Park Service has already begun work on the interagency grizzly bear task force.

The main thing I want to conclude with is that we think that while the interagency task force is important, it is not enough. It has to be supplemented. I am not talking about alternatives; I am talking about supplements.

First, we need to see an accentuated systemwide focus on resource management with greater emphasis on training and research and monitoring. What Mr. Mott was talking about, we have proposed in our book, a multiyear resource management program that will cost some money but we have to have that basic information or we cannot even define what the ecosystem is.

We need to see consensus building in negotiation patterned after the habitat protection plans of the Endangered Species Act and the Coastal Zone Management Act. Again, Mr. Mott's suggestion of an interagency coordination for the entire system is important.

One thing near and dear to my heart, I am a city councilman in Fredericksburg, VA. We are protecting our national park down there, the Battlefield Park, with actions taken by the local government. We are passing a new landscape ordinance and screening ordinance to buffer the park because it is so important to our economy.

We have to look to local governments, land trusts and other entities to help us out here.

In closing, I would like to reflect back on a small group of men who sat around that campfire over a century ago in the remote wildlife and decided to create Yellowstone Park. They could have hardly foreseen the complexity in modern times of reserving Yellowstone's resources for people's enjoyment and benefits. But because they wre able to see beyond the ideas and institutions of their day, no one had ever heard of the national park then, Yellowstone remains a wonder for us today.

I think it is this vision as much as the awesome physical place, this vision is their legacy and the continuing challenge to us to come up with some new ideas to go beyond what may be the accepted way of thinking.

It is a great challenge. I wish you a great deal of wisdom, and would be happy to answer any questions.

Thank you.

Mr. SEIBERLING. Well, thank you.

Mr. Vento.

Mr. VENTO. Mr. Chairman, I have to leave and I just wanted to state, I didn't think it would come to this in terms of my schedule so I would have to leave this panel without asking a question.

Mr. Turnage, I wanted to pass along my cudos for your service with the Wilderness Society and wish you well in your future endeavors.

I thank each of you from your own organizations which have been very active and I hope that you will remain active as you have been.

This has evoked a great deal of emotion and irrationality as well as rationality because obviously a lot of folks that are impacted by this don't know what Congress will do or what we want the administrative agencies to do. I hope that today we have calmed some concerns and we can all work together. I heard positive things from the director and from the Forest Service, and I hope that we can bring them together.

I think there is a sense of tunnel vision here of dealing with the species by ecosystem species. I think nothing could be more disastrous to the idea of communities of plants and animals living in their environment, the definition of an ecosystem as such which has been pointed out.

Dealing with these one at a time is obviously the biggest problem we have. We have to deal with them together. We may have to reintroduce some species that will evoke more emotion, but I think that if we do deal with it one species at a time or just one problem at a time, we are doomed, I believe, to failure.

I think the ecologists that spoke in the past panel pointed that out. We will need your organizations' help to remain involved and build consensus and understanding so we have the confidence of the local folks and others across the country most impacted and most interested in this.

We thank you for your participation today. I will leave this in the trusted hands of my experienced colleague from Ohio to finish this up this evening.

Mr. Seiberling. Well, if possible.

Thank you very much.

Mr. Cheney.

Mr. Cheney. Thank you, Mr. Chairman.

Mr. Seiberling. Before you start your time, let me thank Mr. Vento for the amount of time that he and his staff have devoted to this. I know he is very greatly concerned. He has personally gone out there just to look around and to familiarize himself with the issues before this hearing, and I am thinking that maybe after this hearing I want to go out there and see for myself some of these things.

Mr. Vento. We can all go back. We will go with Cheney.

Mr. Seiberling. We'll get Dick Cheney to lead us, yes.

Mr. Vento. To lead us down the right path—the left path.

Mr. Cheney. Thank you, Mr. Chairman.

I would only be too happy to include my colleagues on the subcommittees in one of our future trips to the area. I get out there a lot, and I am sure we would enjoy it.

This summer I had the opportunity to travel through the Shoshone and Bridger-Teton and Yellowstone system right smack in the area we are talking about, Mr. Barbee and Steve Mealey, the supervisor of the Shoshone, and Reid Jackson on the Bridger-Teton, to look at the grizzly situation. I would heartily recommend it. I think the committee would benefit from it.

If I might, let me first of all repay the courtesy Mr. Turnage extended to me. I think, Bill, while we have often disagreed over the years and have known each other since before your involvement with the the Wilderness Society or my involvement with the Congress, I have always enjoyed our debates.

You are a very worthy adversary and I do think you have done your organization very well. You have been an outstanding leader of the Wilderness Society and I am sure your presence will be missed.

I won't miss you because you are a landowner in Jackson Hole, and I look forward to having the opportunity to continue the debate, I am sure somewhere in the Greater Yellowstone Ecosystem, ahead.

I would like if I can focus for a second on the biggest problem, and that is getting specific about the nature of the threat.

You mentioned in your testimony, Bill, about the Forest Service plans that seem to be the heart of your criticism. If you look, for example, specifically at your quote, on the park's eastern flank the Forest Service calls for a 13-percent harvest increase; more than half the volume would come from the Wind River Ranger District, et cetera. There is another way to look at that specific plan.

I have a detailed article here that summarizes it, in the Casper paper. It says, "Shoshone Forest plan Stresses Preserving Natural Values." Steve Mealey, the supervisor of the forest who earned his Ph.D. in dietary habits of the grizzly in Yellowstone, one of the experts, says the philosophical underpinning of the new plan is to preserve natural values. The Forest Service plan chooses a priority for the forests which relates to what is apparent about the forest when you come here, overriding amenity values such as scenery, wildlife, recreation, and the Shoshone's role in the ecosystem are the forest's most important attributes. It sounds to me what he is saying is very much in tune with the concern that those who are critics of the current system seem to express.

To go on talking about logging, your statement focuses on a 13-percent harvest increase. Specifically, the details under the plan the Forest Service proposes on the Shoshone are that about 101,000 acres out of the total forest, which is 2.43 million acres, 100,000 acres or 4 percent of the forest, is all that would be open to logging, 4 percent. About 60,000 acres of that land is in the Wind River District, as you mentioned.

The plan calls for an average annual harvest of 13 million board feet. While that amount, 13 million board feet, is about the same as the amount of timber sold annually since 1976, the actual cut in recent years has only been a little over 6 million board feet.

So the perception I have when I look at the forest plan is here is a guy very sensitive to the grizzly, who is one of the best trained professionals any place in the world on the bear, running the forest right next to the Yellowstone, whose overall set of values, and I know him personally, are very much in tune with the things you express, and his plan specifically with respect to logging over the next 15 years, involves an area only 4 percent of the forest that will be open.

That looks to me like a fairly restrictive land management scheme and fairly reasonable plan given your views.

How would you respond to that?

Mr. TURNAGE. Sure. You raise some very good points. I am interested in Steve Maley's comments because if we had 155 forest supervisors like him, the Wilderness Society would probably feel a good deal better.

As far as I know, he is the only one they have who has done a dissertation on the grizzly but from now—for the last year, all I have heard from the Forest Service whenever they mention a supervisor is this poor guy Maley. It sounds like they want us to think he is the prototype and there are all these benevolent chaps.

And same with the plan. You picked probably among the six or seven or eight, depending on how you count, forests in the ecosystem, the one that has the smallest amount of timbering. We tried to be fair and cite them all.

Mr. CHENEY. I picked it because you cited it, and I know it intimately.

Mr. TURNAGE. In the paragraph before we cite Custer with a 135 percent increase in harvest and so on. But the point is that first it depends on where it happens as to how critical it is.

Second, you still have to ask the question, if the taxpayers will lose substantial amounts of money on these sales and they are going to have adverse impacts on the grizzly or on the ecosystem as a whole, do we want to continue doing them?

And third, this point that I have been trying to make, when the Forest Service started the planning process a year ago, they talked about 50-year plans. Now Chief Peterson says they don't have that. Now what happens so often is in the first 10 years it doesn't look too bad, but every decision made today determines the decisions that will be made in the future.

Over a 50-year period, if you start looking, if you make a map, and we have been mapping their plans, and you put a little red dot wherever there will be a timber sale, the first 5 or 10 years it doesn't look bad, maybe like measles. But by 40 or 50 years, it looks like the red scare. There is just nothing left of some of these forests.

This is what we have to learn to do, to think out in the long term. We have to look at what are the cumulative impacts going to be.

We feel that 50 years from now this ecosystem, if the Forest Service plans go forward, is simply going to be eviscerating.

Now, at the end of this year, I think is the latest timing, they are going to issue the Bridger-Teton plan, which is the central plan in geographic terms. The Wilderness Society has a team of about two dozen full-time foresters and economists and lawyers examining these plans.

We have done an analysis on the other five key plans in the ecosystem. We have waited for the continually delayed Bridger-Teton plan before we have issued our report and analysis.

I am sure our people will be sitting down with your staff and others in January when we have that critique and really taking a look at the numbers, at the mapping, at the ecological implications. And as I reluctantly agreed, you are a remarkably intelligent man and I think you are going to look at it and say, This is a really serious problem, when you look at it in this sort of longer term forcus.

Mr. CHENEY. Well, I thank you for your response.

I point out that in 50 years, obviously in most areas, obviously it would depend on the climate—you can regenerate a forest. You can cut it down but the trees will grow back.

Mr. TURNAGE. Not in 50 years. The record on that is very poor.

Meanwhile, what happens to you, now water quality and the grizzly and whatever. The Park Service in their comments on the Gallatin plan says flat out that history shows that timber and grizzly bears do not go together. They certainly contradict the testimony that was given today by Mr. Peterson and his associate.

Mr. CHENEY. Am I to take it from that, Bill, what you would look to do is ban all timbering in the Greater Yellowstone ecosystem?

Mr. TURNAGE. I think that the evidence is still being gathered, and I think we may come to that within a decade. I think we may all agree that that is what has to be done.

One very important point is that when the park was established, the word ecology didn't exist and the scientific advances that have been made, particularly in the last 2 or 3 decades, have been simply revolutionary. We are beginning to understand more about the interconnectedness and nature of these problems.

I think clearcutting is probably going to have to end, and if there is future timber cutting in the region, my sense is that it is probably going to have to be selective and very damage selective as to where it is.

The other point I would make is that, as we see it, the future economy of that region depends on the health of the natural ecosystem and not upon how much Federally subsidized timber cutting takes place.

Mr. CHENEY. I am using my time and we have a lot of people lined up, so, as I say, we will go to Jackson or some place in the ecosystem and continue the debate, I am sure, in the future.

One final point, if I may direct it to Mr. Anderson. Bob, your list of threats, I have a problem with them. In a sense, I would hope it is preliminary or tentative or subject to revision, because, as I read through it, I see things in there that were clearly corrected in last year's Wyoming wilderness bill, statements about things that you listed as threats that are in my mind questionable.

I think it raises the credibility problem for all of us to take the notion that an oil well at Meeteetse or an oil well south of Bondurant or a wilderness area that has already been addressed are threats to yellowstone.

I would hope you would be willing to take the list of 88 and scrub it and resubmit it based upon what you think in light of recent developments and what transpired over the last couple years and determine really what constitutes a threat.

Thank you, Mr. Chairman.

Mr. ANDERSON. My I respond to that?

Mr. CHENEY. Certainly.

Mr. ANDERSON. This list was prepared about 1 year ago, about the time the Wyoming wilderness bill was passed, so at the time it was prepared, I think it was fairly accurate.

It was not fairly complete, however, in that at the present time we are updating it and indeed we found oversights in this year's update, and it will be more extensive than the 1984 list.

I would like to put it in proper——

Mr. Cheney. If I might, I would caution those of us who want to be open minded about this debate and not fall into the trap of saying absolutely no change in the management system at all, find it difficult to take a threat list that says No. 6, Beartooth proposed wilderness, I don't know how you list that as a threat. It was included in our wilderness bill.

It seems to me it is one that ought to be dropped. To list the Bridger-Teton forest plan as a threat where the draft plan isn't even published yet, and will be subject to change later, makes no sense.

I can go on the Du Noir proposed wilderness listed as a threat. Thefact is that it is protected under existing law by the Congress and will be protected until such time as we pass legislation to change it.

Maybe you need different categories or something, but if the effort is to be credible in terms of saying there are specific management problems that need to be addressed, then I would really urge you—obviously, you are free to do whatever you want—but I would urge that it be done precisely so that the members can sit down and look at it and say, yes, this is a problem, and we can get an agreement that something needs to be done about it.

Mr. Anderson. That advice is well taken and we will isten to it seriously.

The reason this inventory was prepared was to educate you and others. When the Coalition was first formed it was perceived as a problem, and one of the first questions we asked is, how serious is it? What are the threats? So we began to compile a list so that we and agencies and others could better know the seriousness of the problem.

As we improve this list, our purpose will continue to focus on making this a decision and policymaking document so that it can improve situations and not cloud the issues.

Mr. Cheney. Thank you.

Mr. Seiberling. Thank you.

Mr. Strang.

Mr. Strang. Thank you, Mr. Chairman. I don't want to take much time.

I really respect and appreciate the fact that this distinguished panel did come to talk to us and I think you have helped me, for one, think about some of the problems with straight lines on maps.

I would caution you again, as Mr. Cheney has, that if we are going to work together on resolving land use problems on public lands in the west as we have more and more scientific data, you have to be careful about inflammatory language.

I think it really hurts the process and, for example, when you talk about you have Acquinto recreation in your testimony, Mr. Turnage, I agree, it is important. It doesn't fit with grizzlies. It doesn't necessarily help an ecosystem. It may harm it. But be careful.

So I just would hope that out of all this we can get to a mutual effort to address this and do less name-calling and more constructive work together.

Mr. Seiberling. Does that complete your questions?

Mr. STRANG. Yes.

Mr. SEIBERLING. I have a couple of questions for this panel.

First of all, Mr. Anderson, I thought you made a couple of points which I hope the land management agencies will pick up because, while they have addressed it, you put it in a little different perspective.

You say, for example, that the lack of integrated management results in many inconsistencies and makes ecosystemwide analysis of the forest plan proposals impossible.

I am going to ask Mr. Peterson, Chief Peterson, to comment on that point, where you say the Shoshone National Forest plan recommends all critical grizzly bear habitat be withdrawn from oil and gas development, and that the contiguous forests, Gallatin and Custer, make no such recommendations in their draft plans.

If that is coordination, how does he explain the difference? Maybe there is an explanation, but I think it demands an explanation.

You point out that the economic data in the forest plans are incomplete, fragmented and inconsistent, making a detailed economic analysis impossible.

I don't know whether it is necessary to be able to make an economic analysis on the part of persons other than the people in the Forest Service and maybe it is adequate for their purpose, although we know that it costs more in most cases to sell the timber than the Government gets back.

But I do think that both of those points need to be thrown at the Forest Service and they should be asked if they set up a more coordinated approach, is this going to be reflected in their plans, all dove-tailing in terms of policy with respect to preserving the various resources in the area?

I would like the staff to make a note that we want to ask those questions.

Now, you make four recommendations at the end of your testimony and it seems to me that the first three have been addressed by this hearing.

First of all, you recognize the potential seriousness of the problem.

Second, more information is needed—that is one of the reasons we are having this hearing—and obviously more research is also needed. Mr. Mott in particular said they definitely needed more research.

Third, you say Congress should ask the Federal agencies to review their planning and decisionmaking actions. We have done that today. We have asked them to set up a more coordinated approach.

The only one that is left is the fourth one, which is legislation, and it seems to me that we ought to wait until we see what the other three produce in terms of a more consciously directed and coordinated approach to this problem before we get into the subject of legislation.

Would you agree with that?

Mr. ANDERSON. I think that is a reasonable approach.

On the second point, the second recommendation, I don't think this hearing satisfies the need for information; I think the request ought to be made to an institution such as the National Academy of Sciences to help us with that.

Mr. Seiberling. That is something we might ask Mr. Mott and Mr. Peterson to comment on. I will ask staff to include that in our questions to them.

Mr. Turnage, you have contributed so enormously to the cause of conservation that it would be impossible without a separate statement to even begin to catalogue all of your contributions.

I think your statement has excellent points in it, as I expected, particularly the way you have documented the losses for every dollar invested by the Forest Service in timber cutting in these various national forests.

We still have not received a satisfactory position from the Forest Service as a result of our hearings last June, but there will be another round of hearings in due course.

I thought the other statements were very good. Indeed, Mr. Pritchard, I particularly liked the map you put in the back of your statement. That sort of summarizes your entire critique of this situation.

Mr. Duerksen, you make some suggestions or recommendations at the end of your statement, and again it seems to me that this hearing itself has responded to most of these points, except for item 4, and even there is a recommendation for bringing in local governments into this coordinating process, which I think addresses the point you made. So I feel that this hearing has already produced some good results.

I want to thank all of you for your contribution.

Mr. Turnage. Mr. Chairman, I appreciate your comments. I would like to make the traditional one last request.

Mr Seiberling. All right.

Mr. Turnage. I wonder if after the record of the hearing is transcribed, a copy of Mr. McKinney's favorable remarks concerning my character and conduct could be sent to my mother?

Mr. Seiberling. I will try to arrange for that. Let me say one other thing, because I think this is of interest.

In the Montana's magazine Yellowstone book, they published a couple of excerpts from debates in the Congress back in the 19th century. One of them on page 65, I thought was very interesting.

Senator Ingalls said, "The best thing that the Government could do with Yellowstone National Park is to survey it and sell it as other public lands are sold."

Fortunately, another Senator, Mr. Vest, made a different statement, and said that:

> The last hope of the preservation of the bison, the buffalo, the moose and the elk on the Contintent of North America exists in preservation of that park and to such an extent that it will be a great preserve.
>
> I am not ashamed to say that I shall vote to perpetuate this park to the American people. And I am not ashamed to say that I think its existence answers a great purpose in our national life.

Then on another page, page 80, they quote Congressman Toole, in 1886, who said:

> Mr. Chairman, I undertake to say that the passage of this bill to grant a railroad right of way through Yellowstone National Park is absolutely a commercial necessity.

> It is a wholly unattractive country. There is nothing whatever in it, no object of interest to the tourist, and there is not one out of 20 who ever visits for purposes of observation, this remote section.

Fortunately, the Congress did not go along with either of those suggestions. And when I hear some of the negative comments that we often deal with in this type of conservation issue, I think it is very interesting to see that we have progressed somewhat in the last 100 years.

I want to thank all of this panel for their contribution, as well as my colleagues.

Mr. Turnage. Thank you, Mr. Chairman.

Mr. Seiberling. Let's go on to the next panel.

I am going to start cutting the time down to 3 minutes of oral statements.

I am going to put the members under the 5-minute rule, including myself.

Our next panel consists of Mr. Dave Schaenen, public consultant, Montana; Mr. Douglas Francisco, Independent Petroleum Association of America; Mr. Brad Penn, chairman, Rocky Mountain Oil and Gas Association, Lands Committee; Dr. Darwin Spearing, district exploration manager, Marathon Oil Co., Wyoming on behalf of American Petroleum Institute.

Marathon is based in Ohio; or it used to be. I guess it still is.

Mr. Spearing. Right.

Mr. Seiberling. At this point also I will insert in the record two statements, one from Bob Garner, of Bozeman, MT; and one from Vince Hire, of Bozeman, MT, immediately prior to this panel's testimony.

Without objection.

[Editor's note.—Prepared statements of Bob Garner and Vince Hire may be found in the appendix. See table of contents for page number.]

Mr. Seiberling. All right, sir.

Mr. Schaenen, I am going to have to put everybody from here on out on the 3-minute rule or we are not going to get out of here.

[Prepared statements of Dave Schaenen, with attachment, Brad Penn, with attachment, Darwin Spearing and Douglas Francisco may be found in the appendix.]

PANEL CONSISTING OF DAVE SCHAENEN, PUBLIC CONSULTANT, MONTANA; BRAD PENN, CHAIRMAN, ROCKY MOUNTAIN OIL AND GAS ASSOCIATION, LANDS COMMITTEE; AND DARWIN SPEARING, DISTRICT EXPLORATION MANAGER, MARATHON OIL CO., WYOMING, ON BEHALF OF AMERICAN PETROLEUM INSTITUTE

Mr. Schaenen. I understand that.

Mr. Seiberling. We will put all of your statements in the record.

Mr. Schaenen. I appreciate that.

I would like to make a comment that Doug Francisco was forced to leave to catch a plane, and he will not be here to give his testimony.

Mr. Seiberling. His statement will be included in the record. If not we will hold it open for him.

Mr. SCHAENEN. He apologizes. He had made these reservations some time before.

Mr. SEIBERLING. We apologize for the delay. You saw what happened.

Mr. SCHAENEN. Thank you, Mr. Chairman.

It is a pleasure to be here. My name is Dave Schaenen. I am an oil and gas and public lands consultant, as well as a small——

Mr. SEIBERLING. Bi meir bis du schein.

Mr. SCHAENEN. Right.

I am also a small gas and oil operator. I live at Billings, MT. I am also chairman of the National Public Lands Advisory Council.

The council is comprised of 21 individuals who advise the BLM director and the Secretary of the Interior on policies and programs related to the resources and use of public lands. Under the jurisdiction of the bureau at our last council meeting in Boise, we discussed this proposed great Yellowstone Ecosystem, and the implications that it may have for certain multiple use lands, which are mentioned by the BLM.

At the time I was authorized by the council to invite Director Mott to join us at our meeting in November, here in Washington, so that we might discuss this matter a little more fully. Unfortunately, this hearing came up in the interim, and before our meeting could take place.

However, the council has requested that I appear today to elucidate some of the concerns which we have, and as you are aware, some of the lands which would fall within the confines of the ecosystem would be managed by the Bureau of Land Managmenet, and the council feels that it is important that these lands be used by future generations for both renewable and nonrenewable resources, including, but not limited to, some of the use which you have heard today, such as recreation, range managment, timber, oil, mineral exploration, et cetera.

The boundaries of the ecosystem are somewhat elusive, as I think we have seen, and therefore, it is very difficult to tell which lands would be included and which lands would not be included. When our national parks were set up, they were separate and distinct boundaries based on the assumptions that there were sufficient lands at that time located within those boundaries to employ adequate protection.

I guess for the record, Mr. Chairman, I am going to have to stand on my testimony as it is written, since we obviously don't have enough time to go into everything that is covered.

Mr. SEIBERLING. Thank you.

I have perused your testimony and we will get into it during questioning.

All right, Mr. Penn?

Mr. PENN. Thank you, Mr. Chairman.

My name is Bradly Penn, and I am the newly elected chairman of the Rocky Mountain Oil and Gas Association, [RMOGA], Public Lands Committee.

RMOGA, is a trade association representing hundreds of individuals, independents and major oil companies who account for more than 90 percent of the oil and gas exploration and production activities in the Rocky Mountain west.

My background includes a degree in biology and work for the past 9 years as an environmental specialist in wildlife, vegetation, air quality, and permitting.

I am here today to present RMOGA's testimony on the Yellowstone Ecosystem because we believe it is important to establish and explain the industry's perspective on this concept. We believe that concept has vast impliciatons not only for oil and gas resource development but for the multiple use principles under which the Nation's public lands are managed.

RMOGA is opposed to the concept of a Yellowstone ecosystem for four primary reasons:

One, there is no empirical evidence to support the need to expand the protection of the ecosystem or the flora and fauna contained therein.

Two, more restrictive management of multiple use activities would have a devastating impact on local communities and multiple uses, including oil and gas activities. There is already a substantial body of protective regulations and laws in place designed to protect the park and its periphery, as well as national forest and other public lands with sensitive environmental values.

Three, it has been widely demonstrated in this and other areas that oil and gas activities are compatible with even the most sensitive enviroment, and these operations have proven not to be harmful to wildlife.

Four, oil and gas potential of lands in this are is extremely high.

Although a proposal for more specific managmenet of the Yellowstone ecosystem has not surfaced, RMOGA's concerns are directed toward the concept of establishing a new classification of lands within which multiple use activities will be further curtailed or eliminated altogether.

We have these concerns largely because the need to provide greater protection for the areas outside Yellow National Park has not been substantiated, and the impact of such restrictions would be farreaching.

There is no need for greater protection. Biological data does not support he claims that outside activities are threatening the park and the ecosystem. There are examples attached to the testimony.

There is a picture of an exploratory well that was drilled about 20 years ago in the recently designated Gros Ventre Wilderness in Wyoming. This primarily is naturally reclaimed. The oil and gas potential of the area is high.

The seismic activity, exploration activity in USGS report all led to the finding that the potential of the area concerned in the ecosystem is high.

In conclusion, the existing management siutation in which more than 80 percent of the ecosystem is withdrawn from permanent reservation or wilderness or national parks will provide a superlative protection mechanism for the area.

Thank you.

Mr. SEIBERLING. Thank you, sir.

Mr. Spearing?

Mr. SPEARING. My name is Darwin Spearing, district exploration manager for Marathon Oil Co. out of Cody, WY.

My testimony that you have that is written is mainly to show on our North Fork well that we just completed, the length of mitigation, environmental planning, and interagency review and public review and our own planning that went into the design and construction of this project.

That record is in the written testimony. I think we are proud of that particular activity and I think the Forest Service Bureau of Land Management was also very pleased in this effort in that Marathon received an award, statement of appreciation, which reads, "In genuine appreciation of the outstanding cooperation given both the Forest Service and Bureau of Land Managment and for care given the surface resources in planning for and drilling the North Fork well."

I think I would like to talk a little bit about, however, and introduce into the record two new words, reclamation and revegetation. The conversations have been, what, about the future, and I think that I would like to try to establish that through revegetation, reclamation, the kind of work that we are doing right now on this particular project is novel, it is new, and, I think, has an impact on these types of activities in public multiple-use lands.

We are undergoing extensive reclamation programs in this particular project. We are working with the Forest Service Research Laboratory out of Ogden, UT; and what we are essentially doing began before the project began, before a grain of sand was moved.

We totally photodocumented the area before, land, did a vegetation study. After the site was recontured, we are replanting native seed, in addition to the Forest Service stabilizer grasses.

This was all done by hand tilling and minifarm equipment. Experimental plots were set up in this open meadow site, nearly an alpine site. We fenced four-fifths of it so that one-fifth could be an experimental plot and four-fifths of it could be under revegetation.

There were mulching stipulations set up to test different types of mulching procedures, and one of the most exciting things we were doing, we collected 1,500 plants on site which were split. They are being grown over the wintertime, and we will return 6,000, not 1,500 but 6,000 to the site itself.

The point that I think I would like to make with that is that habitat loss is not a foregone conclusion from an exploratory well that turns out to be a dry hole like this one. I would like to also say that we are certainly entering and have been in an era of accountability.

I think that companies that are operating on public lands recognize that accountability, and advocate managment for balance of resources in a regular and careful approach through time, and that we not head in the future into a crisis management type of situation, where these valuable hydrocarbon resources get crushed by some outside forces, and the environment is not considered in this crisis type of situation in the future.

Thank you.

Mr. **Seiberling**. Thank you.

Mr. Cheney?

Mr. **Cheney**. Thank you, Mr. Chairman. I will be very brief.

I want to thank the panel for appearing. I am truly sorry that given the way we get bollixed up around here with votes and everything else that we aren't able to give all of you the time that you deserve.

But we will certainly pay attention to your testimony, and I do appreciate having the graphs as well.

I want to say on behalf of a lot of us in Wyoming, we are delighted to have Marathon operate in the State, and I know two of our witnesses who are in their other hats who work for Marathon and Marathon really did an outstanding job overcoming the problems that were raised in connection with the develoment of the North Fork well; and I thought it was a classy piece of work. And we appreciate it.

Finally, Mr. Chairman, I would like to just mention for people to keep in mind what we are talking about when we talk about oil and gas activity in Wyoming. We have got 23 counties; land area, over 62 million acres; total acreage under lease, about 39 million acres; actually productive of oil and gas, about 2.6 million acres.

What it all boils down to is the percentage of the leased acreage that is productive of oil and gas is about 7 percent, so when we start to talk about the issue of leasing and the threat that that supposedly constitutes to a sensitive area, we have got to remember first of all the reclamation issue that has been mentioned. There is no question but what we can reclaim those areas in a way that they are certainly consistent with maintaining the higher standards of the environment. There is also no question but what there is enormous difference between the amount of acreage that is leased and what is actually ultimately drilled, and we shouldn't mix up those two figures when we talk about the amount of activities that we have in the area.

Thank you for your testimony, gentlemen.

Mr. SEIBERLING. Mr. Strang?

Mr. STRANG. No questions.

Mr. SEIBERLING. Mr. Schaenen, I thought you had a couple of points that I would like to comment on.

First of all, we are not talking about creating buffer zones around either the park or the wilderness area, except to the extent that the wilderness areas themselves constitute a buffer zone to the park, and that, of course, is one of the reasons that they were created. Is that what you are concerned about in your statement, and the proposed legislation that you were referring to? I presume it was the National Park Protection Act.

That does not mean, however, that we should not consider on the east side of the park, excuse me, the west side, the possible addition of wilderness areas in order to provide that same kind of protection for the species of wildlife that are in the park.

I think that if we acted just to protect those species, for example, the bear, we would have to have a hearing and go into a lot more depth on just what scientific basis there was for making that decision. But I assume that if we did work through the open processes of legislation, then that would not be quite as objectionable to us.

Mr. SCHAENEN. Excuse me, we were concerned, Mr. Chairman, that it not be done administratively.

Mr. SEIBERLING. Yes. Well, that gets me to the next point.

You and Mr. Roberts have recommended that there be joint State-Federal planning in these Western States, which, I think, is an interesting suggestion, and one that ought to be given futher thought.

In the meantime, Chief Peterson has suggested that in their coordinating council they include local governments, and the State government for this ecosystem as a whole.

Wouldn't it be a good idea to let them proceed and set that up, and see how it works?

Mr. SCHAENEN. I think it would be a very good idea. I tried to talk to my governor before I left.

I did talk to one of the people in his office, and never got a response back. I don't know whether this indicates a lack of interest or whether they felt, perphaps, like you mentioned.

Well, let's wait and see what comes out of this, and if they set up a planning group, we will become involved with it at that time.

I don't have an answer to that.

Mr. SEIBERLING. I used to be the President of a regional planning commission in Ohio. It was a purely voluntary job done as a private citizen on the side, so to speak, but we had a very good professional staff, and no powers, but the power of facts, to influence decisions, and I thought it was a very useful and important agency.

As matter of fact, subsequently the Congress mandated area wide review agencies for various regions, and it then performed that function.

I strongly believe in regional planning and getting all for the interested governments and other entities involved. It seems to me that this provides us with at least the beginning of an opportunity to see if the Federal Government can work with all of the different agencies in the Government, and also bring in local and state representation too.

Mr. SCHAENEN. If you went into the testimony you notice that I endorsed the undersecretary's report, as far as getting together for this interagency——

Mr. SEIBERLING. I thought the undersecretary's report was a typical Washington bunch of gobbledygook and didn't really mean anything. It said let's everybody get together and coordinate, but here was no specific machinery set up. I mean it was full of nice phraseology, but here we are talking about a specific set of proposals that both Mr. Mott and Mr. Peterson said they would be willing to work on.

Mr. SCHAENEN. It sounds to me like you already have a fair amount of communication between the departments now.

Mr. SEIBERLING. I think they do.

Mr. SCHAENEN. And I think that should be encouraged.

Mr. SEIBERLING. I just wanted to make sure that we see eye to eye on that.

Gentlemen, I think this has been very helpful. I want to thank you.

Mr. SCHAENEN. Thank you, Mr. Chairman.

Mr. SEIBERLING. Let's go on to the next panel, panel No. 5, consisting of Larry Mehlhaff, Sierra Club, Northern Plains representative; Ed Madej, Seirra Club, Montana Chapter; Mr. Philip Hocker, treasurer, Sierra Club, Jackson, WY.

[Prepared statements of Ed Madej and Philip Hocker may be found in the appendix.]

PANEL FROM THE SIERRA CLUB CONSISTING OF LARRY MEHLHAFF, REPRESENTING NORTHERN PLAINS; ED MADEJ, CONSULTANT, MONTANA CHAPTER; AND PHILIP HOCKER, TREASURER, JACKSON, WY

Mr. MEHLHAFF. Thank you for holding this hearing and giving us the opportunity to talk today. I do not have a prepared statement. I will just be setting the stage for the information that the other two witnesses will be giving.

I am Larry Mehlhaff, the Northern Plains representative for the Sierra Club. My States include both Wyoming and Montana, so I obviously have a intimate interest in this particular issue.

We hope today to show that there is a lack of adequate data within the oil and gas leasing system. There is a lack of adequate public involvement within the oil and gas leasing system, that that there is a lack of adequate environmental review and sensitivity.

And all of these problems have led to additional problems inside of the Yellowstone ecosystem.

First, I wanted to clarify what the map is over here. I hope you all can see that.

The red on this map is areas within the National Forest System that are open to leasing. About three-quarters of that, 77 percent, are areas that have been leased.

That hopefully will clarify some of the discussion we had earlier today.

I also have here several pictures which I will be handing around, which include areas that are open to leasing, and already are leased. They include areas with single drill sites to give some perspective on what that looks like, and a full field development.

These are areas are some within the ecosystem, some on the edges of the ecosystem.

We just wanted to show you some examples of what oil and gas leasing actually looks like.

With that, I will hand these around.

First, I would like to introduce Ed Madej, who will be speaking today on specifically the Yellowstone ecosystem and the problems with it. Ed Madej has been a special consultant heading our project to study the extent of leasing in this are and the problems resulting from it.

Also, today will be Phil Hocker, who is the national club treasurer, and will be speaking about some of the broad problems in the oil and gas leasing system, and some of our proposed solutions.

Mr. MADEJ. Thank you. Chairman Seiberling, and members of the subcommittee.

My name is Ed Madej and I am a geographer and writer in Helena, MT. I have been involved with public lands issues with the Sierra Club in the northern Rockies for 7 years, and have worked on several books concerning the area, including the greater Yellowstone and Montana's mountain ranges.

For the last several months, I have been working on the greater Yellowstone leasing project. I would like to present some of our preliminary findings today.

National forest land of 5.8 million acres, or 59 percent of all the forest land in the Greater Yellowstone Ecosystem, is open for mineral leasing for oil and gas. In fact, approximately 4.5 million acres of the national forests in the ecosystem are already under lease.

I can only say "approximately," because, as we have discovered, it is very difficult to find out from the Forest Service precisely what lands are leased.

Here are some of the facts concerning the leasing situation which we have been able to uncover so far in our investigation.

On the Bridger-Teton Forest alone there are now over 1600 oil and gas leases covering over 2,000,000 acres. Approximately 75 percent of the entire land area of the Targhee National Forest is leased or under lease application.

Forty-five thousand acres of the recently created Gros Ventre Wilderness is currently under lease. In the area of Gallatin National Forest within the Greater Yellowstone Ecosystem, as much as 500,000 acres may be under lease—Forest Service documents are unclear on this point—including 25,000 acres of essential Grizzly bear habitat immediately adjacent to the Yellowstone Park boundary.

There have been nearly 100 drilling permits granted on the forests here during the last 10 years, with the bulk of them being located on the Bridger-Teton and Shoshone National Forests. Drill sites have already been established in sensitive back country areas such as the Mount Leidy Highlands and the Palisades.

An area of such significance as the greater Yellowstone should be a showcase of enlightened land management. With oil and gas leasing, this is definitely not the case.

How little consideration has been given at the leasing state to the potential environmental effects of oil and gas development can be shown by a few examples:

In 1972, and 1973, on the basis of two environmental assessments, one 9 pages long, the other 16 pages long, the Forest Service leased 2 million acres of the Bridger-Teton National Forest.

Also, in 1972, a 12-page environmental assessment was the sole decision document for leasing more than 1 million acres of land on the Targhee National Forest.

In the most amazing example, during 1979, a 15-page-long environmental assessment was used as the basis for leasing over 17.4 million acres to the entire Rocky Mountain region of the National Forest System. This EA covered 900,000 acres of the Shoshone National Forest adjacent to Yellowstone's eastern edge.

By 1982, environmental assessments had gotten longer, but were still far from adequate. During 1982, a 50-page EA was used to evaluate the leasing of 500,000 acres of the Gallatin National Forest.

Earlier this year, the issuance of leases under this EA was found by a Federal court to be in violation of NEPA and the Endangered Species Act. It is the Sierra Club's view that most, if not all, of the other environmental asessments used as a basis for oil and gas leasing in the Greater Yellowstone Ecosystem would be found, under judicial review, to be similarly inadequate.

Some forests, in fact, cannot tell how much of their forest land is even leased at a given time. The Gallatin Forest Plan gives to two different figures on the amount of land leased: somewhere between 200,000 and 500,000 acres.

The Beaverhead Forest plan states that approximately 1.6 million acreas of forest is leased, but does not give any information on the location of the leases.

One or two more points and I will finish here. I would like to focus on the Gallatin National Forest.

The Gallatin National Forest continues to do a poor job on leasing, even after being told by a Federal court that their environmental assessment on leasing is in violation of NEPA. In the current forest plan, the Gallatin Forest proposes opening 82,000 acres of the Hyalite-Porcupine Wilderness Study Area in the Gallatin Range for oil and gas leasing.

This portion of the forest lies directly adjacent to Yellowstone National Park in prime grizzly habitat. In 1982, the U.S. Fish and Wildlife Service suggested that the Gallatin Forest has chosen to ignore this request, and the Gallatin Range will be leased, if Congress releases it from its wilderness study status.

The conclusion we have drawn from the data available to us so far is really quite simple, though my colleague Phil Hocker will explore it in more detail. It is, simply, that without drastic improvements in the environmental review and decision making processes which precede oil and gas leasing, critical areas such as the Greater Yellowstone Ecosystem will continue to be threatened by unacceptable environmental impacts from oil and gas development.

Thank you.

Mr. SEIBERLING. Thank you.

All right, Mr. Hocker.

Mr. HOCKER. Thank you, Mr. Chairman.

I am Phil Hocker. I am a professional architect in Jackson Hole, WY, where I have lived since 1972.

I would like to thank you for holding these hearings, and I would like to thank Mr. Cheney for his steadfast attention throughout a long day.

One of the points that has been brought up a couple of times today has been that there was changes in the last year in the state of protection of the ecosystem in Wyoming, and Mr. Cheney, and you, Mr. Chairman, deserve a great deal of thanks for that, and I wouldlike to thank you both.

The Wyoming Wilderness Act was an important step in this regard, on which you both worked very hard. We are grateful to you.

Mr. Chairman, we feel that there is an outstanding threat, a ticking bomb, if you will, of oil and gas leases existant, and new oil and gas leases proposed to be issued in the Yellowstone Ecosystem. Mr. Madej has outlined how many hundreds of thousands of acres have been leased on the basis of a few thin pages of environmental assessments in various areas throughout the ecosystem.

I think you are aware that once these leases are issued, it is extremely difficult for the Forest Service or any other Federal agency to control what action is taken on those leases. Chief Peterson earlier today conceded that there was no example of an APD having been denied in the Yellowstone Ecosystem on Forest Service lands.

Some lease proposals have been denied, or recommended for denial, by the Forest Service, but once a lease has been issued, no

EPD that has been filed for has been referred by the Forest Service.

We will recommend a couple of critical steps to bring this situation under control. We recommend that minerals planning be integrated with other resources planning on national forests, and on other lands.

On the forests, NFMA plans should include specific mapping on intended policies to issue leases, issue them only with tight controls or to deny issuance, and I would add that where there are tight controls proposed those specific controls should be detailed in the forest plans. These decisions should be made together with other forest planning decisions not in isolation.

In order to make this planning meaningful, the Forest Service must be give statutory authority over all and gas review and issuance on national forests, in the Yellowstone Ecosystem and elsewhere.

Director Burford this morning said the Forest Service has a veto over leasing decisions. That is simply not true, and my testimony includes specific quotes from IBLA decisions contradicting that statement.

Meaningful public involvement must be provided at leasing and seismic or drilling permits in stages before final decisions are made.

Finally, in the Great Yellowstone Ecosystem the Park Service must be involved directly in developing lease issuance plans and in management of sensitive activities on existant leases. At the moment, the Park Service is the third layer in a three-tier system, in which the BLM, although as it has been pointed out it has almost no lands in the ecosystem, has primarily statutory authority.

The Forest Service has a consultative role. The Park Service is rearly even consulted.

Finally, I would like to point out in conclusion that the statement that was made by the earlier panel, Marathon representative, "habitat loss is not a foregone conclusion from an exploratory well that turns out to be a dry hole like this one," is exactly true; but if that well had not been a dry hole, we might have had a very intensive gas development a few miles from a known grizzly bear habitat.

There is no provision in the leasing in the advance stages to prevent that from happening. That condition is being repeated on the Bridger-Teton Forests.

In fact, the Bridger-Teton Forest plan which is in draft stage, not public yet, will propose that new oil and gas leases be approved right up to the eastern boundary of Grand Teton National Park.

The boundary of the park will be protected by a one-half million no surface occupancy stipulation banned, and the Forest Service has been put on notice by the oil and gas industry that that provision of the forest plan will be appealed.

We think that situation must be corrected. We hope that action will be taken by Congress to correct it quickly.

Thank you.

Mr. SEIBERLING. Thank you very much for some excellent points.

Mr. Cheney.

Mr. Cheney. Thank you, Mr. Chairman. Obviously, to be in a postion to be able to specify percentages, as you have here, to draw a map, and so forth, and then to be that precise, you have a fairly precise notion of what constitutes the Great Yellowstone Ecosystem. Is that correct?

You have boundaries. Others before us today have been uncertain about how big it is, where the lines are drawn and so forth.

Mr. Madej. If I can respond to that?

The green outline on your map is just the outline of the national forest which are contiguous to Yellowstone. We didn't attempt to define the ecosystem here.

Your blue outline is the designated wilderness areas that Congress has already designated.

So all we were trying to show was the extent of lands that are open on those national forests surrounding Yellowstone. That does not necessarily mean like in the far south that they may be an integral part of the ecosystem.

Mr. Cheney. Second, I believe your statement, correct me if I am wrong here, if I didn't hear you correctly, but that all of this land is available to be leased?

Mr. Madej. Yes.

Mr. Cheney. I can take it from that it is not necessarily leased? Some of it is, some of it is not?

Mr. Madej. About three-quarters is aleady under lease. One of the problems I found out having been on this for several months corresponding wiht the Forest Services is that they cannot tell you just from phone calls, or from letters, or from documents in their forest plans how much is leased or where those leases are.

Only one forest plan so far, the Traghee National Forest includes a map of the leased land. The others forests do not have that, although I have heard that the Bridger-Teton is attempting to work on that. They are the last forest plan in that region to come out.

As I mentioned with the Gallatin Forest, I can't even find the proper figures on how much is leased. They don't even know in their forest plan. We would like to find out how much is.

Mr. Cheney. Phil, are you willing to argue, in effect, that there should be no oil and gas activity within the Greater Yellowstone Ecosystem?

Mr. Hocker. No; that is not our proposal. I think I this clear to us though, and obviously also where you draw the boundary of the ecosystem would affect your answer to that question.

It is certainly our view, Congressman, that there are areas in the ecosystem which are so sensitive that development would not be acceptable in terms of the consequences it would have, and that some of those areas have been leased already or are about to be leased again.

Mr. Cheney. You clearly agree that includes Yellowstone?

Mr. Hocker. Right.

Mr. Cheney. Grand Teton Wilderness areas, all of those are areas off limits now except to the extent you find a wilderness area with a prior existing right already established which we have to protect.

Mr. Hocker. Which we are excruciatingly familiar with; yes.

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Mr. **Cheney**. We have spent a lot of time on that issue. But without question large areas in the Yellowstone system are, in fact, already declared off limits legally?

Mr. **Hocker**. That is correct.

Mr. **Cheney**. And what you are saying now is that additional large areas that are currently available for leasing and possible development should be placed off limits?

Mr. **Hocker**. Some should be placed off limits. And some should have a much more integrated and coordinated system of stipulations and controls.

Also, that system of stipulations and controls should be planned in a coherent way.

For example, forest plans that are coming out now typically, and this is true of the Shoshone, which is out in draft as you know, and based on advances I have seen will be true for the BT, say, we are going to lease so much, and they give either a better or a vaguer idea of how much will be leased.

Then they say we will deal with the potential impacts of activity on these leases through stipulations, and then they give a sort of general idea of how those stipulations will be applied to the leases. For example, on the Shonshone, the stipulations proposed range all the way from basically wide open standard-forests stipulations down to what I read as a conditional-rights stipulation, a stipulation that barely gives the company a right to go in and explore at all. And there is no way to tell in the basic forest plan which of those will be applicable on a given tract, so neither wildlife biologists, nor an industry-land's man can tell at this point, and can comment either pro or con on those plans.

Mr. **Cheney**. Thank you for your testimony. I am sure we will have more debate over it.

One final comment I guess. One of the things that is worrisome about the concept, or one of the reasons I hear as much criticism as I do from people who are concerned about the Greater Yellowstone Ecosystem, is that many people perceive it as a way for some of the environmental groups to seek to pursue a hidden agenda, which is to get ranchers off the lands, close down timbering, and so forth. I think it is very important to be precise as to what is intended here, or there is going to be far more resistance to the notion of coordinated management than there might otherwise necessarily be.

Finally, let me say I take considerable pride in the Wyoming Wilderness Act, having worked with Mr. Seiberling on that, and, you, sir, provide a great deal of useful information and advice, some which we accepted, some of which we didn't; but I look forward to working with each of you.

Mr. **Hocker**. I think it was a process which we all look back on quite proudly. Thank you.

Mr. **Seiberling**. Mr. Strang.

Mr. **Strang**. No questions.

Mr. **Seiberling**. It was a somewhat painful process for all concerned. But I think the results made it worth the effort.

Mr. **Hocker**. Perhaps one of the proudest things we can look back on is that it is over.

Mr. SEIBERLING. I think there have been some excellent points made in this testimony, particularly with respect to specific oil and gas leasing problems.

Mr. Peterson said that an EIS is not feasible for oil and gas leasing. Do you agree with that?

Mr. HOCKER. Is that addressed to me?

Mr. STRANG. To any of you.

Mr. HOCKER. I seem to have drawn the short straw. We are aware of the problems and the questions which the Forest Service has rasied, and this debate has been going on now for about 7 years as to how much they can anticipate the consequences of development at a lease issuance stage.

Clearly, the possible environmental impacts of each potential drillsite on a lease can't be evaluated in advance, and the Forest Service does a fairly good job right now of working with the oil companies, and I think the companies have been quite cooperative on mitigating impacts within a lease.

However, it is clear that, for example, grizzly bear situation in one habitat and key elk migration in calving areas are not areas where you want developed a full oil or gas field. Furthermore, it public policy dictates an opposite conclusion that decision hasn't been reached any formal way either, so we feel that places where there are clearly large-scale, sensitive qualities to the land can be identified, where no amount of shuffling a lease around or moving an exploratory well around would make full-field development compatible.

Governor Herschler, if I can expand, has put out the idea that the State is interested in leasing for development, not leasing for speculation. I think it is an interesting idea in this case it suggests that we should look at whether development of a leasehold is in the public interest.

If we determine that it is, and those of us in the conservation community are aware that that tradeoff won't always be made as we would perfer, but if the public interest is determined to be one for energy development at the expense of wildlife character of the land, then let's make that decision up front.

If we feel that the wildlife habitat is worth more than the potential energy, let's test that proposition before we issue a lease.

Mr. SEIBERLING. In the Surface Mining Act of 1977, we have a provision for the Secretary to declare certain areas of public lands unsuitable for surface mining. Would the application of a similar concept to some of the areas around Yellowstone with respect to oil and gas leasing be appropriate, in your opinion?

Mr. MEHLHAFF. I think we would say, yes, it would be appropriate. One of the problems was stated very clearly today, that thre has been no APD's denied inside of the Yellowstone Ecosystem.

That goes to show us that we need some other system, some other way of looking closely at all these lands, and a recommendation for withdrawals may be that——

Mr. SEIBERLING. The Yellowstone ecosystem is the concept that does not stand scrutiny, in terms of a specific boundary, so I suppose what would have to be done would be in each case determine whether this is an area that is critical to elk or to bear, or some other species; or to the scenic character of the park; or the water quality; or some other consideration, and then make that determination.

However, once the lease has been granted, it seems to me that your point is well taken, that the ability of the Forest Service or the BLM to then deny a permit is greatly weakened, and that the decision ought to be made to the extent information is available to make it, prior to leasing.

Is that basically your position?

Mr. Mehlhaff. I think that is the key point to our position.

Mr. Seiberling. The questions you asked Mr. Peterson, and Mr. Mott, and the other members, and to other agencies, is whether they have the authority to determine that certain areas are not suitable for leasing because of the impact on the wildlife of the ecosystem, and therefore they are not going to lease, have you any opinion as to the validity of their doing that in the absence of additional legislative authority?

Mr. Hocker. Mr. Chairman, if I may. Existing law is quite clear. Leasing of oil and gas is discretionary in the Secretary of Interior. That authority has not been delegated to the Forest Service or to any other agency, except to the extent that it has been delegated to the BLM in the Interior Department.

The Secretary can deny the issuance of leases, so he does have that authority. At the moment the Forest Service makes recommendations to the BLM, and as was stated this morning, those recommendations are customarily respected, although as the IBLA opinion cited in my testimony points out, the BLM cannot simply defer to the Forest Service, according to IBLA ruling that has to make its own determination.

The unsuitability petition is a process which might be helpful.

We think that the planning proceeses we are recommending in our testimony would also achieve the same end, whether one is preferable to the other I couldn't say.

Mr. Seiberling. I guess where endangered species are involved, like the grizzly bear, they could base a denial on that, if it would injure the preservation of the bear. But where there was a scenic value, that might be something else again. If the Secretary has discretion, I guess that would be sufficient.

You do make a point, you say that critical Federal policies controlling lease issuance are decisions made by BLM with no input from the Forest Service.

Well, they apparently don't agree with that. They say there is input and they even have a veto.

Mr. Hocker. The policies to which I was referring is a directive from the Director's office issued in the fall of 1984, stating that all lands wiich are applied for on leases should be leased if at all possible with stipulations, and strongly discourages no lease recommendations.

Mr. Seiberling. That is the policy that was handed down from above, in other words.

Mr. Hocker. In the Bureau of Land Management, and that policy is applied to lease applications on Forest Service lands.

Mr. Seiberling. You also point out that BLM, which is responsible for leasing, has no experience with the needs and sensitivities of this ecosystem, and yet it has the ultimate authority legally. The

Forest Service has responsibility for surface management but has no ultimate authority, and the Park Service you say is not even consulted on lease decisions which surround it.

If this administrative or coordinating mechanism is expanded along the lines that Mr. Mott and Mr. Peterson suggested, certainly consulation would take place, I presume. But that is a good question that we ought to submit to them and ask them if they would make provision for that.

We could go on at some length. I have used up my 5 minutes, so I guess I had better call it quits. I want to thank you very much for raising some very important considerations, which we shall pursue further with the agencies.

Mr. HOCKER. Thank you, Mr. Chairman.

Mr. SEIBERLING. We will proceed with the next panel consisting of State Representative Dan Budd, Big Piney, WY; Mr. Bland Hoke, Teton County commissioner, representing the Teton County Commission; State Representative Walter Younglund, of Colorado, representing the Western Legislative Conference; State Representative Ann Strand, Rock Springs, WY.

[Prepared statements of Dan Budd, Bland Hoke, and Ann Strand, with attachment, may be found in the appendix.]

PANEL OF STATE REPRESENTATIVES CONSISTING OF DAN BUDD, BIG PINEY, WY; BLAND HOKE, TETON COUNTY COMMISSIONER, REPRESENTING THE TETON COUNTY COMMISSION; WALTER YOUNGLUND, COLORADO, REPRESENTING THE WESTERN LEGISLATIVE CONFERENCE; AND ANN STRAND, ROCK SPRINGS, WY

Mr. BUDD. Mr. Chairman and members of the subcommittee, my name is Dan Budd. I am a State representative for Sublette County to the Wyoming State Legislature. I am also a lifelong resident and rancher in Wyoming.

National forests have historically supplied multiple-use management which is not available on private lands or other Federal agencies because of their management policies. Most of the commodity uses and local recreation use in my area represented by the ecosystem occur on the Bridger-Teton National Forest in northwest Wyoming.

I believe the Forest Service has been managing the area in a coordinated way with neighboring forests and two national parks in the best interest of the American public, and there is no need to establish further legislation to impose additional coordination and restrictions on commodity uses.

The livestock industries of Sublette and Teton Counties in Wyoming are very dependent on the national forest for forage during the summer months to support their operations.

Ecosystem-sponsored programs, such as the reintroduction of the gray wolf into national parks, is of great concern among livestock producers in these areas. Restrictions to protect this predator could cause severe damage to the local livestock industry not only on public lands but also on private lands.

Local lumber mills and family-owned, small operations are almost entirely dependent upon the national forests as a source of timber to produce posts, poles, lumber, and firewood.

The local economies, public services, school systems, and road and highway programs of the counties are dependent upon receipts from national forest lands from oil and gas leasing, timber, and grazing.

Big game hunting is extremely important in the area from both a recreation and economic standpoint. Hunting on national forests maintains animals in balance with their habitat and provides income for towns, and local outfitters, and guides.

Hunting also helps control animals that migrate out of national parks that may be carrying brucellosis, a disease very contagious to livestock which can force quarantine of large areas.

Noxious weed control is practiced on national forest lands and coordinated with aggressive county and State programs to prevent their further spread and infestation to new areas.

Area statistics that could be affected within Sublette and Teton Counties on the Bridger-Teton National Forest portion of the ecosystem include: 25,565 head of cattle, 174 head of horses, and 3,750 head of sheep are permitted to graze on the forest within the ecosystem boundary. These permits are held by 98 operators. The length of the grazing season varies between 2 to 4 months for these animals; 1,055,400 acres of classified wilderness already exists in my area, or about 48 percent of the Yellowstone Ecosystem area on the Bridger-Teton National Forest. In addition, 165,340 acres are designated as wilderness study areas.

Approximately 1,082,800 acres outside of wilderness areas are available for oil and gas leasing. When comparing the lease rental feel of $1 per acre for the first 5 years of a lease, and $3 per acre for the second 5 years, together with the nonrefundable lease application fee of $75, the potential Department of the Interior collection for this area amount stood between $4 million to $6 million annually. Fifty percent of this is returned to the State for disbursement to counties. Royalty payments from discoveries could add significantly more revenue.

Between 3 and 4 million board feet of timber is utilized annually by small, local sawmills.

Water production occurs in the amount of nearly 3.5 million acre-feet yearly from the Snake and Green Rivers systems. Wyoming and its citizens must continue to have access and title to water originating on Federal lands free from encumberances on impoundments and uses.

The potential economic losses of critical and strategic minerals through wilderness designation have been addressed in studies by the U.S. Geological Survey. Of 322 wilderness areas studied, the USGS considered 220 favorable for the occurrence of one or more mineral or energy resources.

Because of lack of an analytical mode, little or no information is available to estimate the lost value of the mineral resources.

I appreciate the opportunity to testify in this hearing on the greater Yellowstone ecosystem, and I stand opposed to any additional congressional legislation in this area.

Thank you.

Mr. SEIBERLING. Mr. Hoke.

Mr. **Hoke**. I look down at my notes and I see my prepared statement showing my naivete about congressional committees. I made a scratch saying good morning, good afternoon, and good evening.

It is a great pleasure to be here in this distinguished company.

My name is Bland Hoke, and I am here today representing the Board of County Commissioners of Teton County, WY.

To provide a bit of personal background; I am in the real estate business in Jackson Hole, WY, and my educational background is in economics. I also serve on the board of directors of a local bank and as a trustee of the Jackson Hole Land Trust.

I would like to convey my appreciation and that of my fellow commissioners to your for holding this factfinding hearing. It is appropriate that you do so because you are addressing an idea which has great potential to strike the imagination for the American people.

National recognition of the Greater Yellowstone Ecosystem could have major economic and environmental effects on three States of Idaho, Montana, and Wyoming.

In Teton County, our community has a growing awareness and support of our tourist-based economy which is uniquely dependent upon maintaining the environmental resurce which sustains it.

Let me give you a brief overview of Teton County.

Almost 97 percent of Teton County, WY is in Federal ownership. Grand Teton National Park is totally encompassed in our boundaries.

We have about half of the 3.4 million acre Bridger-Teton National Forest and portions of the Targhee National Forest. Included in our county—within the Bridger-Teton National Forest—is the famed Teton Wilderness and the newly created Gros Ventre Wilderness, as well as the Palisades Wilderness study area.

We also have the National Elk Refuge which provides winter refuge for approximately 8,000 head of elk. Because of the preponderance of Federal public lands interspersed with 75,000 acres of private land within Teton County, we are accustomed to working closely with Federal and State agencies.

Furthermore, we know that wildlife is no respector of lines drawn on maps. The public as well as the private lands of Jackson Hole include critical wildlife habitat, particularly along the riparian lands of the Snake River.

In short, our county is like a microcosm of the Greater Yellowstone Ecosystem with nearly all the jurisdictions and the conflicts that are played out on a larger scale in this last great block of wild lands in the lower 48.

There was great local resistance to the formation of Grand Teton National Park in the early days of Jackson Hole. But to repeat our postion, there is now a recognition within our community that the tourist-based economy of our area is dependent upon maintaining the environmental resource which sustains it.

We believe that the long-term, economic destiny of this region lies in tourism and recreation. In stating this belief, we are not arguing for expansion of national parks or for buffer zones, which are managed as national parks or wilderness areas.

We do, however, support a much more integrated approach to management of these nationally significant lands. Because of the unique character of the Greater Yellowstone Ecosystem, it seems to us that management directions that might be appropriate in most national forests may not apply here.

We believe that scenic, wildlife, and recreational values should receive the highest priority in this part of the country. Commodity uses, like timbering, and oil, and gas, should be accommodated only when their effects do not threaten the long-term primary values.

In addition, we would like to see integrated management of public lands so that consideriaton is given to the cumulative effects of land use policies on the region.

Our board of commissioners recently received copies of correspondence between aides in the offices of Governor Evans in Idaho and Governor Herschler in Wyoming discussing the possibility of a forum for State and local officials within the Greater Yellowstone. We are extremely supportive of this idea.

We urge broad participation from local economic and governmental entities as this idea evolves. A series of intergovernmental meetings held in Jackson Hole over the past few years have proven to be most valuable in improving communication and understanding. We would expect to see the same positive results on a larger scale.

Ultimately, we think a shared understanding and support for the Greater Yellowstone concept among many people and the entities in the region could result in an enormously powerful marketing tool for the recreational economy. The economy of the northern Rockies has been slowly maturing.

Over the last 100 years, we have seen the transition from laissez faire exploitation of natural resources to a regulated exploitation of natural resources with mitigation of environmental impacts.

Wyoming has seen booms and busts throughout its history. People in this region are realizing that protection of the natural, scenic and wildlife values is essential to the economic stability that we seek for the long term.

It is high time to begin a thoughtful dialog which elevates these senic, recreational and wildlife values of the Greater Yellowstone Ecosystem to a level ensuring quality and perpetuation for generations to come.

Thank you.

Mr. SEIBERLING. Thank you.

Representative Younglund.

Mr. YOUNGLUND. Thank you, Mr. Chairman, members of the committee.

I am wearing two hats today. I am representing the Western Legislative Conference which includes 13 Western States, three Pacific possessions. I represent Colorado on that western conference which is a member of the Council of Governments, Council of State Governments. I represent the Public Lands and Energy Committee of the State of Colorado.

I am also vice chairman of the Colorado Interim Committee on Public Lands and Water, which I am also representing today.

When I first went in the General Assembly back in the sixties I felt a little humble because I was the only legislator that only had an elementary education. Then Congressman Strange joined the

Colorado Assembly and found out he hadn't gone to grade school or high school, so I feel so bad.

Mr. Chairman, members of the committee, we of the Legislative Western Conference are not sure what to expect and so we have heard there was going to be a buffer zone around Yellowstone. I have heard different here today, but the thing that we are most concerned about is what the Yellowstone ecosystem could do to the economy of local and State governments.

The main concern we have is once these were adopted and it did affect seriously our economic system, we feel that it might be a precedent which would eventually migrate onto other wilderness areas and to our other national parks.

So I am just going to have my resolution 85-Q from Western Conference State Legislature, also the letter I have written to you in regard from the Colorado Interim Committee on Water and Public Lands.

I would read the last paragraph. "Now, therefore, be it resolved that the Western Legislative Conference of the Council of State Governments requests that Federal land administrators adhere to the will of Congress and refrain from adopting actions or practices which extend beyond their jurisdictional limits as defined by Congress."

Thank you.

[Editor's note.—Proposed Resolution No. 85-Q follows:]

WESTERN LEGISLATIVE CONFERENCE
THE COUNCIL OF STATE GOVERNMENTS

720 SACRAMENTO STREET, SAN FRANCISCO, CALIFORNIA 94108 (415) 986-3760

PROPOSED RESOLUTION NO. 85-Q

PARK PROTECTION AND ECOSYSTEM MANAGEMENT

(Introduced by the Land and Energy Committee)

Expressing Concern over the Adoption of "Ecosystem" Management Policies for National Parks and Wilderness Areas and Urging Federal Land Administrators to Adhere to the Will of Congress in Managing Federal Lands

WHEREAS, federal land management agencies, particularly the National Park Service, have recently indicated strong support for "ecosystem" management policies which would create legal buffer zones around certain national parks and wilderness areas; and

WHEREAS, the implementation of such policies would sharply curtail development activities for oil, gas, mining and other minerals which are vital to the nation's economic well being; would cause a sharp reduction of timber harvest and grazing; and would have an economic impact on small towns within these buffer zones; and

WHEREAS, the implementation of "ecosystem" management practices over lands not included in the national park and wilderness system would weaken the multiple use management principle and would negatively impact control, use, and economic development of intermingled private and state lands and their resources and tax bases; and

WHEREAS, Congress has expressly rejected this concept of public land management when it refused to enact the National Park Protection Act during the 98th Session;

NOW, THEREFORE, BE IT RESOLVED that the Western Legislative Conference of the Council of State Governments requests that federal land administrators adhere to the will of Congress and refrain from adopting actions or practices which extend beyond their jurisdictional limits as defined by Congress.

Alaska • American Samoa • Arizona • California • Colorado • Commonwealth of the Northern Mariana Islands
Guam • Hawaii • Idaho • Montana • Nevada • New Mexico • Oregon • Utah • Washington • Wyoming

Mr. Seiberling. Thank you.

Representative Strand.

Ms. Strand. Mr. Chairman, members of the subcommittee, my name is Ann Strand, State Representative to the Wyoming Legislature, Sweetwater County. Sweetwater County lies south of the proposed Greater Yellowstone Ecosystem boundary. My country is made up of 69 percent Federal land.

William Penn Mott, Jr., Director of the National Park Service, at a meeting of the Greater Yellowstone Coalition in Yellowstone Park in June of this year, stated: "When in doubt, we must err on the side of preservation. Should we subsequently find ourselves wrong, we can always provide for more use."

That attitude tends to break down State initiative and to devitalize State and local policies. It simply invites aggrandizement of national power and prevents any cooperative decisionmaking once that power is concentrated in Washington. Cooperation becomes increasingly difficult because the stronger member of the combination usually calls the tune. Add to that the human factor that admits that one of the most difficult phrases in the English language is "I was wrong." Mr. Mott said there are also private and Government entities with interests at stake and roles to play. Indeed, there are, but these entities will be excluded with an internally selected task force membership. Listen as I read from the draft of the Greater Yellowstone Tomorrow Project Draft Outline III.

September 1985.

> The task force presiding over the development of these public policy scenarios would reflect the diversity of interest involved in one way or another with the Greater Yellowstone. Representatives would need to come from the Park Service, the Forest Service, the three State governments, local and national conservation interests, the extractive industry, tourism, agriculture, the scientific community, local government and the general tourist population.
>
> All of us agree with those guaranteed broad-based area-of-interest representatives; but the very next paragraph abrogates any idea of unbiased representative: "Actual selection of the task force will require great care. Its administration, fundraising and staffing will be done through the Greater Yellowstone Coalition, the parent entity to the overall Tomorrow project.

I have attached for your information a membership list of the organizations who compose the greater Yellowstone coalition. There are no members, none, of any group not historically affiliated with the conservation movement, and several conservation organizations that are active in Wyoming are notable by their absence in the membership list.

[Editor's note.—The above-mentioned membership list may be found in the appendix following Ms. Strand's prepared statement. See table of contents for page number.]

Ms. Strand Mr. Mott calls for a regional management of the Greater Yellowstone Ecosystem. Quote, "The preparation must be accompanied by the concerted effort of all major affected entities, keeping in mind that maintaining a wild, natural environment must be the foremost objective."

I have a question—the one that brought me to Washington. Do the plans being pushed forward for the proposed ecosystem encroach upon the rights of citizens who live within its boundaries? I am fearful that the answer is a resounding "yes" if the solution embraces Mr. Mott's statement, "maintaining a wild, natural environment as its foremost objective."

If multiple-use of the ecosystem is lost, will the concept of condemnation of individual property rights through the power of eminent domain become the tool to achieve "the foremost objective"? Preserving individual property rights must be of primary consideration. Will efforts to maintain the status quo deny the "in-holders", people with deeded land surrounded by national forest land, any options for development? Or will they be required to seek permission from the National Park Service or the Greater Yellowstone Coalition? What about our cities, towns and unincorporated communities encircled in the proposed ecosystem? Shall they also not be allowed to grow?

I am a Democrat, a member of the minority party in Wyoming, and because I am, I firmly embrace the principle that government exists only to help those who cannot help themselves. I cannot live with the thought that I did not exert whatever small influence I may have to protect individual property rights.

I do not believe that Wyoming citizens, as well as the citizens of Montana and Idaho who live within the proposed ecosystem boundaries, would deliberately seek to "foul their nests." The protection of multiple-use concepts, as well as the freedom to use them, is a concern to each of us. The obligation of our three States to continued magnificence, enjoyment, benefits and use of Yellowstone National Park and its surrounding areas has been one we have accepted with appreciation and dedication to their preservation.

I urge that no further legislation diluting our citizens' participation and use be forthcoming.

Thank you, Mr. Chairman.

Mr. SEIBERLING. Thank you.

This panel has raised some very interesting points. First of all, let me say, Mr. Younglund, that we at no time have considered legislation to establish buffer zones around National Parks. The opponents of the legislation tried to put that label on, but basically we were talking about legislation that would require the various land management agencies in or out of the Interior Department to inform the Secretary of the Interior and give him the opportunity to comment where a decision might impact the Park before they made the final decision.

Frankly, I still don't see anything wrong with that concept, but because of the fact that there were apparently people who feared it would create buffer zones, and there were other people who didn't want the right hand to know what the left hand was doing, it never got anywhere in the Senate. A lot of the people who were concerned about it said, well, let's deal with these subjects on an ad hoc basis. So since this particular matter of the Yellowstone National Park and the protection of its wildlife and other qualities is before us here, it raises the same issue in a way and we are doing what a lot of people who oppose that legislation recommend, namely we are looking at a particular situation and seeing what needs to be done.

So I just want to assure you we are not contemplating any legislation creating a buffer zone around Yellowstone National Park with the exception I would say that wilderness legislation in Idaho and Montana is still on the agenda and it may well be that in the process of considering that, the impact of creating wilderness on the preservation of some species, like grizzly bears, will be taken into account.

But that is not quite the same thing as what I understand you were concerned about.

Mr. YOUNGLUND. Thank you, Mr. Chairman.

I was pleased to hear that.

Mr. SEIBERLING. I am glad you came because it gave us the opportunity to reassure you that as far as I am concerned we are not considering that sort of thing.

Ms. Strand, I haven't read Mr. Mott's speech to the Greater Yellowstone Coalition in June of this year, but I do have his proposed Greater Yellowstone Interagency Committee, which he passed out today. There is nothing in it about bringing in members of the Greater Yellowstone Coalition to participate in that structure and, of course, Mr. Peterson is already thinking along similar lines in setting up a sort of coordinating committee including local government representatives, but no mention was made of bringing in people from outside of government.

So I think that probably what Mr. Mott was talking about was telling the Greater Yellowstone project people, Greater Yellowstone Coalition people, that they should set up their own task force to monitor this situation and make recommendations or, as he called it, scenarios, which are quite different from public policy decisions that would be made by the land management agencies themselves.

So I think we have got apples and oranges in here together. I do not construe what Mr. Mott or Mr. Peterson said today or any of the discussions we have had as contemplating bringing in outside organizations to enter the decisionmaking process as such.

However, any decisionmaking process of this sort ought to have an opportunity for public input before the decisions are finally made. That is the whole basis for the National Environmental Policy Act's procedures and environmental impact statements. I have heard some criticisms here today that the procedures of the Forest Service and BLM do not permit adequate public input. I would assume that you, as a citizen, would want to have that input and obviously, if you have it, everybody else should have it, too.

So I just want to make sure that we are on the same wavelength in terms of discussing what is being proposed. Do you want to comment on that?

Ms. STRAND. Yes, Mr. Chairman. I think that I would like to have some guarantee or assurance that there is a broad based representation and that we don't end up with a totally one-sided group of people who—when you talk about a joint public coordinating agency or committee, as Mr. Mott and Mr. Peterson talked today, I hope that you will remember that there are some of us who are dedicated to hearing from everyone.

Mr. SEIBERLING. Don't you agree, though, that the various supervisors of the National Forests and the BLM and the Fish and Wildlife Service and the Park Service, when decisions are made that will impact this whole area, ought to get together and at least discuss the impact of those decisions before they make the final decision? Wouldn't that be a good idea?

Shouldn't the right hand know what the left hand is doing?

Ms. Strand. That would be very nice.

Mr. Seiberling. I think it would be a good idea and it ought to be—there ought to be an opportunity for public input and if the Greater Yellowstone Coalition or you or anybody else at that point wants to give their ideas, then they ought to have that opportunity. That is all, I understand, was talked about here today and that is certainly about all I have in mind. I think I could speak for my colleagues.

Ms. Strand. Mr. Chairman, excuse me for interrupting. I guess maybe as I sit just south of the proposed ecosystem, I have some fear that once adopted, it may also require another ecosystem to protect the ecosystem.

Mr. Seiberling. There is no proposed ecosystem.

Ms. Strand. The boundaries stretch out across the State and for people who own private land really, will they be allowed to operate?

Mr. Seiberling. We are not proposing to adopt an ecosystem. We are discussing whether there is one and if so what is it and how do we properly deal with it.

Ms. Strand. You are proposing to adopt management of it.

Mr. Budd. Mr. Chairman.

Mr. Seiberling. Yes.

Mr. Hoke. Being involved in the Riley Ridge overthrust, I think you are probably all aware it is probably the largest gas structure development in this Nation, large as anything in the Middle East and sitting here as a representative and private citizen with the Forest Service and with the Bureau of Land Management and with the USGS in public meeting after public meeting, getting input, I think that the Forest Service is doing an excellent job in coordination.

I think that the proof is in the Riley Ridge field which is being developed, one of the largest structures known in the United States today is that gas deal in a highly environmental area.

There are many concerns, livestock grazing, timbering, everything that is involved, much recreation. I can tell you that the Forest Service has held public meeting after public meeting, input, everything. I would like to commend them and I think that your committee should recognize the effort that has been put by the Forest Service in fulfilling those requirements of the law.

Mr. Seiberling. I think we do as a matterof fact, and I think, however, that Chief Peterson today himself conceded that they needed some further improvements in their internal coordination and their coordination with other agencies and he himself has made some suggestion to that end.

Mr. Hoke, I want to commend you for an outstanding statement and I would say that you must be an unusually good county commissioner because it seems to me you have a real grasp of this whole picture here which is something that spending many years dealing with county commissioners at home and abroad, I don't usually find.

Mr. Hoke. Thank you very much.

Mr. SEIBERLING. Usually, their views are parochial and that is their job to just look at revenues and immediate future. But you have got a very broad view of the overall picture and I think it is outstanding. I just want to commend you for a very fine statement. Thank you.

Mr. Cheney.

Mr. CHENEY. Thank you very much.

Three-fourths of the panel is from Wyoming so it is nice to have an opportunity to welcome my constituents here. They also have the difficult assignment of serving in elective office.

I always have a lot of sympathy for county commissioners because they are so close to their constituents they have very little flexibility in terms of how they operate.

Mr. Hoke and his colleagues do a good job in Teton County and I appreciate you coming today. I want to say a special word.

Dan Budd represents a long-time, very prominent family in Wyoming and speaks with great authority on behalf of his constituents in Sublette County and Ann Strand is one of the leading lights in the State legislature from the one Democratic county in the State.

I wish we could put Mr. Seiberling and his friends into the same status Ms. Strand enjoys. Unfortunately, we haven't been able to work that out but we are working on it. I do think it is important, Mr. Chairman, to emphasize at this point what we are dealing when we start to talk about ecosystems and new management schemes, and I do appreciate the chairman's assurance that has been repeated here several times today that what we are doing is holding an oversight hearing and not exploring legislative language and legislative proposals at this point but remember what is at stake here isn't just a question of managing an important natural resource that people in Switzerland and elsewhere around the world can look at with fondness. We are also talking about decisions that affect the lives of thousands of people, people who vote for me and in some cases my opponent, but who live and work in Wyoming.

They live there because it offers the kind of opportunity and lifestyle that is important to them and for us to get into a situation where we ignore those values when we consider how Federal agencies might operate, it seems to me would be a serious dereliction of our duties and our responsibilities.

We think we have done a first-class job in Wyoming. As Dan pointed out on the natural gas developments in the Riley Ridge areas, we have one of the greatest energy resources in America. In the overthrust in southwestern Wyoming we have one of the biggest oil fields in the United States. In the carbon dioxide deposits in that part of the State which will be used in tertiary oil recovery across the country, it is a major resource.

We don't want to be in the business on this committee and I certainly would resist any effort that led to legislative initiative that interfered with a legitimate ability of the people of Wyoming to be able to make a living. Tourism is a vital part of that.

Certainly Bland Hoke from Teton County and his fellow commissioners recognize that and that is a dominant part of the economy in that part of the State, but there ought to be room for all these interests and there ought to be, it seems to me, wise management of these resources that takes into account all these values, not just the question of any one particular set of values.

So I appreciate your being here today. Again, I am sorry you had to wait so long to testify but I do want to thank you for taking the time to help us in our deliberations.

Thank you very much.

Mr. YOUNGLUND. Mr. Chairman, I would like to assure Congressman Cheney, my closest town, is Pine Bluff, Wyoming, even though I am the one man on the panel not from Wyoming.

Mr. SEIBERLING. Mr. Craig.

Mr. CRAIG. I will read your testimony. I take special concern and interest with local officials who are responsible for the governments of the local areas, especially in the West, who have the great complication of having to blend their key decisionmaking with their own local authority and with the Federal Government. That is a unique situation that we find our local officials of the West in.

Being from Idaho, I appreciate that a great deal. We in Idaho, like Wyoming and Montana, find our States in large part dominated by Federal management agencies and what I have always said about the West when some of the folks from outside the West think we don't understand what we have and therefore they have got to help us protect it, I always like to remind them we understand along time before they ever realized what we had and that is why we are living there.

In so doing that, we have to be able to live there and make a living while we are enjoying our beauty and protecting it, so they can come and visit it. I appreciate your testimony.

Thank you, Mr. Chairman.

Mr. SEIBERLING. I want to thank the panel again. We appreciate it and hope you have a good trip back.

Our next panel consists of Mr. Gordon Mickelson, Big Piney, WY; Merle Bauman, DuBois, WY; and Dr. James Robinson, Dubois, WY.

Gentlemen, which one is missing? Mr. Mickelson is not here.

Mr. Bauman.

[Prepared statements of Merle Bauman and James Robinson may be found in the appendix.]

PANEL CONSISTING OF MERLE BAUMAN, DUBOIS, WY; AND JAMES ROBINSON, DUBOIS, WY

Mr. BAUMAN. Mr. Chairman, members of the committee, I am Merle Bauman. I have a hardware store and auto parts store in Dubois, WY. I am a member of the DuBois City Council and have been active in my community as a member of the chamber of commerce.

I am here on behalf of the Citizens for Multiple Use. Our organization is composed of citizens from northwestern Wyoming who have an interest in maintaining the multiple use management which has been traditional in our area for many generations.

We feel the Federal policies concerning public land s in Wyoming have a direct impact on those of us who reside in the local communities. It appears to us that Government actions regarding the use of public land have largely been in response to the pressures of special interest groups and have ignored the impacts on local citizens.

All of us are concerned about the environment. I fear, however, that the resource-use pendulum has swung all the way from abuse to non-use. It seems to us we see more proposals which would limit man's activities to the point he will be excluded from the forest.

I would like to give you a quick vocal tour of our area. As we travel out of town we first cross private lands. After that we enter into the BLM. You will see a lot of cattle grazing, a lot of different interests.

As we pass that we get into the national forest. There you see all kinds of activities, all multiple use, which helps to support our communities. As we travel farther, we come to the end of the road and at this time we will see that basically it is a roadless area. For any of you who are not capable of taking a long trip, this is where we will have to leave you, but as we travel through this area you will see more and more of just a special use.

Incidentally, at this point we are in bear country. You might be surprised to find that many of the citizens of our area were in favor of setting up this wilderness. How much, however, to set aside was a different and painful task.

Those decisions are now behind us. We hope we won't have to go through that decision process again in the near future. My hope is our tour showed you somehow all the pieces fit together to make a place where we successfully protect the natural environment while using those resources for economic purposes.

The balance between these two objectives is delicate. The citizens for multiple use feel the balance is achievable and urge these subcommittees to abstain from any action that would take away that balance.

Thank you.

Mr. Seiberling. Thank you.

Let's hear from Mr. Robinson.

Mr. Robinson. Thank you. I am the local superintendent of schools in DuBois, WY, a community that falls within the Greater Yellowstone Ecosystem. I am also vice chair of a local group called Citizens for Multiple Use.

As year-round residents of DuBois, WY, we have found that our existence is dependent upon multiple uses of our public lands. Lumbering, oil, gas, grazing interests, and tourism provide an integrated economic structure for the communities of northwest Wyoming. As each of these interests serves as a cog in our wheel, we are continually reminded of the necessity to balance and maintain each for its contribution in the structure.

Of equal importance is the fact that we have chosen to live where we do for the quality of life afforded us in the various uses of these public lands in western Wyoming. The public lands provide playgrounds for such activities.

In combination we have established an economic basis for our community from the same public lands upon which we recreate. Essentially, we have found a balance of multiple uses which allows us to support ourselves in our chosen environment.

Generally, these members enjoy the luxury of not having to concern themselves with providing a tax base to pay for social services

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like the school system with which I am affiliated. Neither do these members carry any responsibility for providing employment for a labor force resident in communities like ours. Needless to say, such special interests create a considerable amount of anxiety for those of us who do bear the responsibilities for providing services and employment.

The concepts associated with the Greater Yellowstone Coalition preservationist philosophy are particularly threatening to us. The imbalance created by such concepts invalidates our roles as full-time environmental caretakers of the public lands which furnish us our existence, both economic and recreational.

The preservationists understand the concept of a balance of nature, yet in turn, they threaten our existence by suggesting changes which create an imbalance between economic and recreational factors. We view such an imbalance as a direct threat to our livelihoods and ultimately our opportunities to reside in the places we have chosen. Are we not the endangered species? Let me illustrate.

In our county the oil and gas industry's share of property assessed for taxation in fiscal year 1984 was 72 percent of the total. Our school system is supported by these property taxes. One in every six students in the school system comes from a family where members are directly employed by the timber products industry.

Reduced timber harvests will threaten the livelihoods of these families. If these families are forced from the community, the school system in turn will experience a reduction in force. Ranching is the predominate land use with 90 percent of the agricultural land devoted to grazing.

In our State, Uncle Sam owns nearly one-half of the surface and two-thirds of the mineral estate. The past several years have seen bitter struggles over wilderness additions and surface management policies. We have been forced to accommodate these additions. We have adjusted and survived. Thank you.

The tolerance of our adaptability is limited, how ever. We have peacefully cohabited with Yellowstone interests for 112 years and derive a part of our earnings from the visits of 4 million people annually. We appreciate the natural heritage preserved for generations.

We are sincere stewards of lands both park and public. At the point of establishment, the park was dedicated to the purpose of the "benefit and enjoyment of people." Now preservationists are suggesting increased boundaries or buffers where "minimal disturbances by man's activities" will cancel our present existence as we know it and dismiss the original intent of the park itself.

We hope you will "leave well enough alone" so that we will be available to greet you on your next visit to Yellowstone.

Thank you.

Mr. Seiberling. Mr. Hansen.

Mr. Hansen. I would like to ask permission to insert the statement of Gordon Mickelson into the record, Mr. Chairman.

Mr. Seiberling. Without objection.

[Editor's note.—Prepared statement of Gordon Mickelson may be found in the appendix. See table of contents for page number.]

Mr. **Hansen**. I would like to thank Mr. Bauman and Mr. Robinson for appearing today. It has been a long day. We had an opportunity to chat yesterday. They do represent a very important community, Mr. Chairman, that is on the edge of the area that is debated and derives its livelihood from the public domains.

It is important to reiterate the points they make that in Wyoming if you are in agriculture you have to graze on the public lands. If you are involved in the minerals business, the oil and gas industry, you have to have access to the public lands. If you are involved in tourism and recreation, you have to have access to or relationship with the public lands.

If you simply like to hunt and fish, you still need access to the public lands. So the decisions that we make in the way the agencies conduct themselves are vital and I don't think anyone would suggest that problems with the ecosystem are going to be solved by closing down legitimate economic activities that have been compatible with the preservation of this system.

So I do appreciate your testimony and the time you took to come present it. I want to thank you.

Mr. **Seiberling**. Thank you.

Mr. Craig.

Mr. **Craig**. Just to thank the panel for their testimony. Thank you.

Mr. **Seiberling**. I would like to ask Mr. Robinson, I note in your statement you say the oil and gas industries' share of property in fiscal year 1984 was 71.9 percent of the total. Does that mean that is 71.9 percent of the total tax revenues of the county?

Mr. **Robinson**. Of my school district. $21 million of assessed evaluation, $21 million, and $14 million of that is oil and gas.

Mr. **Seiberling**. That is a pretty important tax base. What will happen when the oil and gas is all gone?

Mr. **Robinson**. Then we are probably gone as well, and that is our concern.

Mr. **Seiberling**. It is going to be gone some time. So it certainly seems to me that indicates that where you have a wasting asset it is important to preserve the other assets and, of course, as Mr. Bauman pointed out, tourism is an important asset.

You have pointed out that grazing and ranching are very important. So what we are trying to do is to make sure that in making decisions that the Forest Service, the BLM coordinate so that they take into account all these multiple uses and not just do it blind without any consideration about the impact on the other resources.

I yield back my time.

Mr. **Hansen**. Our experience in Wyoming oil and gas has shown that we do have a considerable resource. It has been an important part of our economy for a great many years. The industry is having some problems now because of the nationwide oil glut. The fact of the matter is we made major new discoveries in Wyoming just in the last few years and the biggest problem we face, frankly, is the fact that we are continually plagued with additional restrictions and limitations that put other areas of limits and that makes it impossible for us to fully explore the potential for those resources.

But we have been able to go to much greater depths than ever before and find oil and gas in areas where previously people had found only dry holes. So I would by no means at this point want to base a policy on the assumption that somehow the oil and gas activity in Wyoming should come to a halt and that there is no further resource there to be discovered

We think it is there to be discovered. We think we can do it in an environmentally sound way. We think we can develop it and then move on with reclamation without doing any damage to the environment and we would like to have the opportunity to do that.

Mr. SEIBERLING. Thank you.

We will proceed next with panel No. 8. Mr. Evans, good to see you.

[Prepared statements of Amos Eno, Brock Evans, Thomas McNamee, with attachment, Mary Wright, with attachments, and Tony Povilitis, with attachments, may be found in the appendix.]

PANEL CONSISTING OF BROCK EVANS, VICE PRESIDENT FOR NATIONAL ISSUES, NATIONAL AUDUBON SOCIETY, ACCOMPANIED BY AMOS ENO, DIRECTOR, WILDLIFE PROGRAMS, TOM MCNAMEE; MARY WRIGHT, TROUT UNLIMITED, MONTANA STATE CHAPTER; TONY POVILITIS, WILDLIFE BIOLOGIST, DIRECTOR OF CAMPAIGN FOR YELLOWSTONE'S BEARS

Mr. EVANS. With your permission, Mr. Eno will go first for Audubon.

Mr. ENO. Mr. Chairman, today we have heard ample testimony about the need to manage the Yellowstone ecosystem as a single entity. We have also heard concern over the potential threats and impacts to Yellowstone from, among other things, timber sales, oil and gas leasing, excessive road building and various forms of encroachment from bordering areas.

These are real problems, and Audubon shares many of the concerns expressed about them by others today. However, we think it is important to look beyond the enumeration of threats in order to focus on existing initiatives and potential new mechanisms which can lead us to continued resolution of outstanding problems and improved holistic management of the ecosystem.

Rather than dwelling upon the difficulties, legal, bureaucratic, and otherwise, in ecosystem management, we wish instead to accentuate the positive by focusing on the concept of Yellowstone as an ecosystem which could be managed within existing governmental frameworks and statutory mandates.

The current program to protect the grizzly bear provides an excellent example of both the strengths and weaknesses of the existing system, and provides us with an important reference point on which to measure future efforts.

Given these advances, where do we go from here? Outside of broad legislative mandates, congressional proclamations, and other exhortations, what processes exist to help continue the progress toward a holistic management of the GYE?

To begin with, all the effort and information contained in the five different forest plans and national park master plans can be brought together and examined in context of the bigger picture: a "Greater Yellowstone Ecosystem Plan", if you will.

The on-the-ground professionals of the Forest Service and National Park Service can take their individual plans and undertake a coordinated master planning process during which future trends are forecast and conflicts are drawn out. Where conflict exists or can be anticipated, new management directives can be drafted and the GYE plan worked into the individual park/forest unit plans.

Outside review by interested parties, especially local government entities, should be integrated and constructive participation by all interested parties encouraged early enough in the process to make a difference. While such a process is not perfect, recognize that first, it utilizes existing governmental structures and builds upon the expertise of the land management professionals; second, the process permits the integration of private as well as public interest in an ecosystem-based approach; and third—and most importantly—this process can be undertaken right now without the necessity of legislation, or undue bureaucratic delay.

We have made a number of specific recommendations in our testimony. I will run through them very quickly.

First, we quantify the resources that are transportation, boundary and the impacts on those resources.

Second, that we streamline the administrative bureaucracies.

Third, that we bring Federal and State land management agencies to go with local community and industry leaders.

Fourth, we believe we need research to quantify the impacts of recreation.

Fifth, we need to improve Federal and State agency communication.

Sixth, we have great concern on the Forest Service's decisions relating to road building and timbering in sensitive wildlife areas, and;

Seventh, we recommend BLM and the Forest Service should prepare an ecosystem-wide study on the cumulative effects of oil and gas leases.

My final comments today relate to apublic relations problem plaguing the efforts to conserve the Yellowstone ecosystem whatever that definition may be. Many defenders of the ecosystem concept by and large are seen by local residents as meddling outsiders. They come into the Greater Yellowstone Ecosystem, shove preservation and ecology down the throats of the locals on behalf of bears, trees and wilderness and then go back to their comfortable city homes, leaving the locals to deal with the economic consequences of the new designations, restrictions and regulations.

The Forest Service-contemplated road and timbering program for this ecosystem is clearly out of hand and conservationists are not proposing new restrictions but a policy of reason.

The final point we would like to make, Mr. Chairman, is if we are going to be successful in efforts of promoting the recovery of the grizzly, restoring the whooping crane and the natural and land base of the ecosystem, we need to cooperate with local residents.

Mr. EVANS. Mr. Chairman, I will just say a few more brief words and then go on. I have been sitting here all day—all day—listening to the testimony of all the witnesses. One thing seems to come through everything else, and that is this Yellowstone region is a very special place.

I would say it is a central, important—even sacred part of our national life because the Yellowstone complex is after all the symbol of all the parks we have. It is the very first national park complex in the whole world and we should be very proud of ourselves as a people for setting it aside.

Now, the agencies are trying harder to recognize this. We have worked hard with them through Amos' work and the grizzly matter and we want to keep doing that. The fact is we do have a stress population of grizzlies here and also have a very unique place. We feel this is not the place to practice the traditional extracted policies and practices we might see elsewhere.

This is a place for a new integrated concept of management in cooperation which does involve local and State people as well as all of us across the nation who know and love and treasure this place.

I think we can do all these things together. The Audubon Society has thousands of members in this affected region as well as across the country and we want to assure you we will be right there working as hard as we can.

Thank you.

Mr. SEIBERLING. Thank you. Let's now hear from Mr. McNamee.

Mr. MCNAMEE. Thank you, Mr. Chairman. My name is Thomas McNamee, and I am the author of a book called "The Grizzly Bear," which focuses on the grizzlies of the Greater Yellowstone Ecosystem. I am grateful for this opportunity to try to help them.

The grizzly bear population of the Yellowstone Ecosystem is in deep trouble. There are a lot of people in Federal agencies who are justly proud of their efforts to save the Yellowstone grizzly, but their just pride sometimes obscures the inescapable fact that their efforts are not succeeding.

There are probably about 30 percent fewer grizzlies in this ecosystem than there were 20 years ago, and their number continues to fall. I am supplying you with copies of a recent scientific paper describing a computer model that predicts the future status of the Yellowstone grizzly population under a wide range of variation.

The model was run for two time spans, the first of 30 years and the second of 100, both starting with the latest available survivorship figures and the latest estimated minimum number of females of reproductive age—a grand total of 36 mother bears as of last spring. The mean result of 5,000 runs of the 30-year model projects a drop of nearly 60 percent in the crucial mother grizzly population by the year 2015. Of 2,000 runs of the 100 year model, almost half result in total extirpation.

There are manifold habitat problems for grizzlies in the Yellowstone Ecosystem, and there are more on the way, particularly in the five national forests that form an indispensable part of this population's range. Nevertheless, given a serious long-term conservation effort, the habitat is fully capable of supporting a thriving grizzly population in perpetuity. We will never have a chance to carry out such an effort, however, unless immediate and dramatic action is taken to deal with the ongoing catastrophe of man-caused mortality.

Year after year, more grizzly bears are being killed in this ecosystem than can possibly be naturally replaced. Of the latest estimated minimum of 36 reproducing females left alive—a number probably already too high—we may be experiencing a net loss of two more every year, and it is easy to see where that will lead.

Most of this killing is illegal but preventable. Nonetheless, despite the many splendid ideas propounded in Federal documents like the "Guidelines for Management Involving Grizzly Bears in the Greater Yellowstone Area," and the "Grizzly Bear Recovery Plan," Federal agencies are failing to stop the killing. Why?

In part, simply because they don't enforce the rules. I was in the heart of Yellowstone grizzly country in the Bridger-Teton National Forest this past summer, and it was a virtual powder keg of bear problems just waiting to explode—filthy camps full of unsecured food, illegally dense concentrations of people and livestock, lots of firearms and outfitters who showed nothing by contempt for the grizzly guidelines.

The young backcountry ranger in charge told me he wanted to write citations but was under orders not to. Four grizzlies, by the way, have been illegally killed so far this year on the Bridger-Teton alone. I am supplying you with copies of my correspondence with the Forest Supervisor. I think you will find it interesting reading. The situation there, alas, is not untypical.

And why is that? The underlying cause, I believe, is the veritably Gordian contrariety of management among the agencies, among individual administrative units, even among ranger districts. In the absurd belief that somehow we can have it all, the Yellowstone Ecosystem's two national parks, six national forests—reporting to three Forest Service regions—and three States pursue dozens of goals that simply cannot be reconciled with one another or with grizzly recovery, and there is neither coordinated planning nor central authority capable of slashing through the hopeless snarl.

The Interagency Grizzly Bear Committee is a proud achievement precisely because such elementary cooperation has been virtually unknown until recently—but I must stress that the IGBC, too, has failed to arrest the population's decline.

Meanwhile, the grizzly bear just goes on trying to live in what to him, as to any other sensible observer, is one place—Yellowstone—while all around him boundaries, rules, mandates, procedures, philosophies, self-congratulation, and mortal danger swirl in bewildering profusion.

Thank you.

Mr. Seiberling. Thank you.

Mrs. Wright.

Ms. Wright. Thank you, Mr. Chairman.

My name is Mary Wright. I am here representing the Montana Council of Trout, Unlimited. Our primary objective is the enhancement and preservation of habitat and water quality in America's cold water fisheries.

Mr. Chairman, I will summarize my testimony and with your permission, submit it in writing for the record in a few days.

Mr. Seiberling. All right.

Ms. Wright. Montana is blessed with a number of rivers that sustain cold water trout fisheries. These fisheries are economically and aesthetically important to Montana. Yet the rivers and their fisheries are constantly threatened.

Downstream water quality and quantity are diminished annually, primarily by drawdown, by agriculture for irrigation. They are threatened upstream by the practices that we have been talking about today—mining, road building, logging and so forth—when these uses are not conducted in a manner that respects good watershed management.

Partly because of downstream demands on our rivers and partly because of the inherent need for good management upstream, what happens to these rivers and their tributaries in Yellowstone Park and in the national forest surrounding the park is crucial. The headwaters of every major river system in the United States, the Western United States, can be found on the Yellowstone plateau. We are primarily concerned in Montana with three of these rivers, the Madison, the Gallatin, and the Yellowstone.

The economic value of these rivers is enormous to Montana. Various studies have been conducted. One indicates sport fishing alone was responsible for $24 million in revenue to southwestern Montana.

They are valued for their aesthetic value as well as by Montanans as well as people from out of State. Let's talk for a moment about the trout that lives in the rivers.

Trout are migratory. Typically, they will begin their life in the headwaters or a tributary to the mainstream river and live there for a time before they go to the mainstream river. After that they will return to the tributaries to spawn over the gravel beds on the stream bottom. When human activity disrupts the integrity of the watershed, erosion increases and sediment ends up in the streams. It precipitates out and begins to cover the gravel beds the trout need for spawning. What happens at that point is that first, the trout will spawn anyway, but the eggs do not survive because they are starved for oxygen by the sediment.

Eventually, the habitat is completely lost for spawning and this, together with egg loss due to oxygen deprivation, means that fewer young will be produced and eventually go to the mainstream river.

That is not all that happens. The sediments also starve aquatic insects that provide a major resource for trout. The end result of this process is a sterile, lifeless stream. When that happens, activity that has benefited a few causes eventually a major loss for us all of a common resources.

Mr. Chairman, our organization is not here today to lobby against logging and road building and all the other practices we have been discussing, but we strongly believe they have to be planned and conducted in a way that will preserve our common resource.

That is not now being done. The forest plans which affect quality of water in headwaters and tributaries to our rivers are forest specific. They don't contemplate what these affects will be downstream and we believe that it is absolutely necessary that these contributions be taken into account.

We urge that land management decisionmaking agencies in these areas surrounding Yellowstone Park observe high and consistent standards both of the park and of our downstream resources.

Thank you.

Mr. SEIBERLING. Thank you.

Dr. Povilitis.

Mr. POVILITIS. I am Dr. Tony Povilitis, and I represent Yellowstone's bears.

Over the past 3 years, I have thoroughly examined biological information regarding the grizzly bear, which has become the symbol of natural integrity of the Yellowstone area.

I offer my findings to the committee through two recent petitions to the Office of Endangered Species, of which I would like to make part of the hearing record.

[EDITOR'S NOTE.—The above mentioned petitions may be found in the appendix following Mr. Povilitis' prepared statement. See table of contents for page number.]

Mr. POVILITIS. In brief, the evidence shows that the grizzly bear population continues to decline or at best is marginally stable.

The Forest Service chief misinformed you earlier today in saying that grizzly bear mortality has recently decreased. It has not.

One of my petitions requests the official designation of critical grizzly bear habitat as recommended by Dr. John Craighead. I know of no better single action to help the grizzly.

It would require that Federal actions be planned and managed so as to ensure the recovery and conservation of the grizzly. In contrast, on the bottom line is no jeopardy to its existence.

Considering that the grizzly was listed as threatened in the American West over 10 years ago, and that its status in Yellowstone clearly has not improved, it is about time its critical habitat be officially designated as intended by the Endangered Species Act.

I strongly urge your committee to investigate carefully this issue of critical habitat for the Yellowstone grizzly bear.

One other recommendation is to have the agencies do an EIS on impacts of the full range of human activities and developments on the grizzly bear, and act on the results and you will see, I believe, grizzly bear recovery in Yellowstone.

Thank you very much for this opportunity to comment.

Mr. SEIBERLING. All right. Thank you.

Mr. Cheney.

Mr. CHENEY. Thank you, Mr. Chairman.

Maybe at some point we would want to hold a hearing on bears, because my experience has been that the experts disagree significantly in terms of exactly what shape we are in now with respect to the bears, but I don't think we have time tonight to pursue in detail all the questions.

I have read Mr. McNamee's book. I was in the Shoshone, the Bridger-Teton, and the park this summer looking specifically at the bear situation again as well as looking at management practices, and I must say the impression I gained from the people I talked with was not nearly as bleak as you apparently gained.

I have experience in traveling that part of the country and I suppose I have ridden 300 miles up through there over the last couple years, and that country is not heavily utilized at all.

Obviously, parts of the habitat, the area you mentioned, the Teton wilderness areas are not that heavily used by packers. It is a very remote area, very hard to get to, and while obviously we continue to have problems with the bears, I wonder if you find that there are other experts around who disagree with your assessment.

Is everybody as pessimistic as you?

Mr. **McNamee.** I think anybody who looks the population data can't help but see evidence that suggests a decline.

You might argue there is marginal stability, but seven bears already died this year in that area—in the ecosystem, four on the BT alone. That is an intolerable level of mortality.

Mr. **Cheney.** Mr. Barbee, what have we had by way of bear mortality this year?

Mr. **Barbee.** That is essentially right.

John, you have the figures, do you? Do you have the specifics? We can detail that for the record.

[The information follows:]

[Editor's note.—At time of printing, the Department had not yet supplied the information requested by Mr. Cheney. When received, that material will be placed in the committee files of today's hearing.]

Mr. **Cheney.** I would be interested in seeing them because the numbers I saw in August when I was there basically painted a relatively improved picture.

Mr. **McNamee.** It only started to get worse about the first of September.

As for the sparseness of use, it is true that there is vast amounts of country very little used, but the use is concentrated largely in the best grizzly habitat such as the Yellowstone meadows, and if your ride took you down Atlantic Creek, you saw the use so heavy that the trail has been churned up to the point where at many points it is a 30-foot-wide churned-up path and there are camps with as many as 30 and 40 people with food all over the place there, spending the night.

Mr. **Cheney.** What I saw was a serious effort by the Forest Service to adopt new practices with respect to food, preservation of the establishment, of steel boxes and other measures so you could get any attractants cleary out of the reach of the bear, lock it up at night, and I was impressed with the quality of the effort being made to educate people.

Now for the first time when you drive in the east entrance of Yellowstone, you come across signs that warn you, you are coming into bear country. You stop at the ranger station on the east side of the park and there is a woman in there who runs an operation on a full-time basis for tourists and people headed for the back country where they can come in and get specific information on the bears and watch a videotape. There is a significant effort under way to try to educate people with respect to the bears.

So I would be interested, we don't have time to pursue it now, obviously, but I would be interested in the data if you care to submit any, or maybe write me a letter on the specifics that you base your judgment on.

Mr. **Eno.** Be glad to.

[Editor's note.—At time of printing, Mr. Eno had not yet supplied the information requested by Mr. Cheney. When received, that material will be placed in the committee files of today's hearing.]

Mr. CHENEY. Thank you.

Mr. SEIBERLING. Mr. Craig.

Mr. CRAIG. Thank you, Mr. Chairman. I know it has been an issue of great importance for a good long while, and it has had a lot of us interested in and concerned not only because there was a declining population for a period of time but because of the practices that the park took early on that caused rather dramatic declines.

I guess the question I would have of you, Tom, would be that you were citing a variety of examples of intensity of use being negative to that bear's environment. You mentioned people.

I assume that the people use part of it or is more heavily concentrated in greater numbers than it is today, than ever before because of the desire of people to get outside and to use the parks and our natural lands and enjoy them.

You did mention something in a series of thoughts you had. You mentioned livestock and concentrations thereof. I assume you were talking about cattle or sheep, domestic livestock.

Mr. MCNAMEE. I was referring to the horses and mules owned, used by the outfitters.

The Forest Service has regulations, of course, on the number of head permitted per site. Those regulations were being violated almost everywhere I went.

Mr. CRAIG. You feel they were being violated?

Mr. MCNAMEE. Absolutely. In fact, the ranger confirmed that to me himself.

Mr. CRAIG. This was inside the park?

Mr. MCNAMEE. No; in the Bridger-Teton.

Mr. CRAIG. In the Bridger-Teton?

Mr. MCNAMEE. Yes.

Mr. CRAIG. And no enforcement of the numbers or number requirements was made?

Mr. MCNAMEE. That is correct. The wilderness ranger wanted to write citations but he was ordered—under orders from the district ranger not to do so.

The district ranger indicated to me, I went to everybody up the line, and eventually lost my way in the tangle there. But it was clear that there was direction not to be too tough on outfitters, work out an accommodation.

As you will see in my correspondence which I am submitting with Reed Jackson, the supervisor, it goes back to 1980. In fact, I was told the same thing then and no action was ever taken. No punative action was ever taken.

Mr. CRAIG. That was the type of livestock you referred to?

Mr. MCNAMEE. Yes.

Mr. CRAIG. That used for purposes of outfitting?

Mr. MCNAMEE. That is right, and it is associated with, of course, caches of feed, and that is principally the problem, the feed for the horses which is acting as a bear attractant if it is not properly stored.

Mr. CRAIG. What are you recommending is the ideal grizzly habitat, an area absent of man?

Mr. MCNAMEE. No. It is just a matter of managing the presence of man in a way that doesn't result in dead bears.

There are a lot of approaches possible but the principal thing to keep in mind is that bears continue to be shot. They die with bullets in their bodies.

Mr. Graig. Yes.

Mr. McNamee. If that can be prevented, that will be OK and you can have lots of people in there.

Yellowstone Park is a good example. It is heavily used and yet bears are not dying there. They are dying in the national forests for the most part.

Mr. Craig. Outside the park boundary?

Mr. McNamee. That is right.

Mr. Craig. The seven you referred to this year, the mortality, the rate of seven, did those bears die outside the park?

Mr. Eno. I am not sure. I think John Varley can tell me this.

Mr. Barbee. I have the list for this summer.

Mr. Craig. Yes.

Mr. Barbee. There were four bears on the Bridger-Teton Forest; those are all illegal kills.

Mr. Craig. Illegal kills.

Mr. Barbee. One in Yellowstone which was a road kill. In West Yellowstone, there was a male bear removed for management reasons. It became habituated. There was a bear removed for the same reasons at Cook City. So that is a total of seven.

Mr. Craig. So actually you could say that four were illegal and three were by—well, obviously, one by happenstance. He got in the way of a car?

Mr. Barbee. That is right, yes.

Mr. Craig. The others were management decisions?

Mr. Barbee. Yes.

Mr. Craig. And the bear had to be killed; he couldn't be packaged and moved? I know you do that now and then.

Mr. Barbee. They already had had their chances.

Mr. Craig. I see.

Mr. Barbee. We give them——

Mr. Craig. Naughty bears, right?

Mr. McNamee. May I add something on the management kills?

Mr. Craig. Sure.

Mr. McNamee. I think in the case of Cook City deaths and the West Yellowstone one, in both cases these were bears that were habituated to garbage because garbage had been made available in their habitat. After bullets, garbage is certainly the biggest killer of bears.

Probably it is bullets that killed them—I don't know how they died, but it is what resulted in No. 15, probably what resulted in No. 15 eating that guy a couple years ago. That was a garbage-habituated bear.

It continues to happen because largely of the nonenforcement of the rules I referred to. Garbage continues to be available and it results in killer bears, dangerous bears.

Mr. Cheney. Will the gentleman yield?

Mr. Craig. Be happy to.

Mr. Cheney. How many were cub-bearing females, or females?

Mr. Povilitis. The figure is two.

Mr. Cheney. Two of the seven.

Mr. Povilitis. Right.

Mr. Barbee. Four.

Mr. Craig. Four of the seven.

Mr. Cheney. Thank you.

Mr. Craig. One last comment, and I know people's patience has to be getting short, and I would ask this of Mr. Evans.

Brock, in our discussion about the Greater Yellowstone Ecosystem, it is interesting to me in the course of the day that we have, I guess by nature and by design, directed a great deal of our attention to activities outside the park on those lands that surrounded, very little attention or not much has been given about activities inside the park.

If the Yellowstone National Park is the heart of the system and as is true with any heart of any system, if the heart isn't healthy, then the system isn't healthy, what is your opinion or the opinion of the National Audubon Society at this time as to the heart, the park itself? Is it healthy?

Mr. Evans. That is a good question. I think that basically we feel it is.

Things can always be improved, and we know about the Fishing Bridge conflict, for example. The park always has people management problems and will continue to have them, and yet what is absent from the heart, if you will, that causes problems outside the oil and gas, the roading and timber cutting into new regions, that doesn't occur in the heart, and I think that that helps to make it healthy in that sense.

The people problems are everywhere. They are in the heart as well as the outside. But the other problems are not so much there.

Mr. Craig. But the people problems per se, not as you would be concerned with timbering or gas or oil exploration, but just the shear impact of people, people coming to love that area, are we handling that proposition pretty well in the park at this time in your opinion?

Mr. Evans. Well, I feel there is room for improvement. I went through there in a car with my family a few years ago and when you are around the popular spots like Old Faithful, there are tremendous crushes, hardly like a national park or the image of one. When you get away from there, those particular parks, it is a little more like a park experience.

There is certainly room for improvement there. No question about it. But I think they are getting a handle on it.

Again, I cite the Fishing Bridge as an example. We are learning more all the time as a people and as agencies about impacts on ecosystems like those things we didn't know 5, 10, 15 years ago. I think they are trying to apply them.

Mr. Craig. Thank you.

Thank you, Mr. Chairman.

Mr. Seiberling. Thank you.

Brock, in your statement you made a series of recommendations about coordinating mechanisms that might be improved. You heard the testimony of Mr. Mott and Mr. Peterson, I presume. Do you feel that they are basically on the same track that you are recommending?

Mr. EVANS. Well, Mr. Chairman, there could be more coordination than there is right now. We tried to focus on the——

Mr. SEIBERLING. They say they want to have more coordination.

Mr. EVANS. Right.

We cited the grizzly program as an example where they are cooperating a lot and we have participated through Mr. Eno here and our people there in working with the agencies. That is definitely improving over what it was some years ago.

We have had some concern about some of the other extractive use programs. There has not been as much coordination there.

I wonder if Amos would like to respond.

Mr. ENO. Mr. Chairman, this addresses Mr. Cheney's point. We feel there has been, in spite of the continued problems with it there, and we are not out of the woods by any means, but there was a night-and-day difference between the capabilities the agencies can bring to bear to address the problems as a result of the formation of the interagency grizzly bear committee.

The committee provides a model for addressing cooperation problems that can be expanded, on and it is very analogous to a Section 7 consultation with endangered species.

You don't have as many snaildarter conflicts because the problems are addressed way down the bureaucratic ladder with people picking up the phones and having formal consultations and reacting. That is the way you have the agencies working on the grizzly now.

The coordinators, each of the main agencies have coordinators, and a lot of the problems are being ironed out at relatively low levels before they become huge problems that major public controversy results over.

Both agencies are making recommendations that can be improved on in this model.

Mr. SEIBERLING. In your statement you recommend that concerning oil and gas leasing in this area, that the various agencies, BLM, Forest Service, et cetera, should prepare an ecosystemwide study detailing the long-term and cumulative environmental impacts of existing and proposed leases and field development potentials.

That seems to me to be a very excellent suggestion. I will ask the staff to ask the agency why they shouldn't do that, because I foresee as a result of the court decision cited by one of the earlier witnesses, particularly, that if they don't, the court will find that all of these oil and gas leases are invalid, and by now, after the experiences with RARE-II and that sort of thing, I don't think that that should be treated lightly by either the oil and gas industry or the BLM.

Mr. ENO. That is right.

Mr. SEIBERLING. So I would think some sort of EIS would be very, very good, at least in terms of any future leasing, and it also might prevent the kind of conflicts that have been discussed today. I think that is an excellent suggestion.

Mr. POVILITIS. Mr. Chairman, I wonder if I can add to that point.

Mr. SEIBERLING. Sure.

Mr. POVILITIS. I would strongly urge that such an EIS request or petition to the agencies would include in addition to oil and gas leasing, energy exploration, a hard look at the full range of human activities and developments, because what we are faced with in terms of grizzly bear recovery is determining the kinds and levels of human use of the ecosystem that are compatible with that recovery.

Mr. SEIBERLING. It seems to me that is part of an ongoing administrative responsibility that they ought to conduct. I don't think you can do an EIS on it because it is too general. That means you will have an EIS on everything going on in the area. That would be——

Mr. POVILITIS. Enormous undertaking.

What I am speaking of is technically one can assign risk values to things like black bear hunting in grizzly bear habitat where grizzlies are mistakenly killed for black bears. One can assign a risk value to roads, to——

Mr. SEIBERLING. I suspect that can be done but I suggest that that is something that needs to be an ongoing activity rather than something you do in a one-shot study trying to evaluate all these different things together.

It would just be an enormous—I may be wrong, but my reaction is that you are asking for too large an undertaking.

Mr. POVILITIS. I think in terms of planning, I think one would get a much better feel for—for instance—whether or not Fishing Bridge or Ski Yellowstone is something that the ecosystem can take in terms of grizzly bear recovery.

Mr. SEIBERLING. Perhaps so, but it seems to me this is something that ought to come from some kind of an overall planning process which all these agencies would participate in rather than trying to make a study of all these things. Your point is well taken. You need to have a view of the overall and cumulative impacts of all these activities.

I am just suggesting that I don't think that that is quite the same as the EIS that deals with the cumulative effect of one activity, which is oil and gas.

Mr. CRAIG. Will the chairman yield?

Mr. SEIBERLING. Yes.

Mr. CRAIG. In light of this discussion that is going on, let me ask another question of our bear experts that kind of intrigues me as this suggestion goes on, because Mr. McNamee had mentioned people impacts and the difficulties with that and the livestock involved, the outfitters, et cetera.

And that being the major problem in the bear environment.

My thoughts go something like this, and I don't necessarily find them in conflict and I would like your reaction. In the area of oil and gas exploration where we know the kinds of techniques employed and the kinds of demands we can put on the exploring and developing companies in which there would be impact, yes, of course, but mostly limited and not many people, frankly, and the kind of people management where you could easily demand that certain activities be done in relation to food and the types of things that might attract bears.

I find it interesting that you would—that you are focusing in on that when it sounds like in your earlier conversation it was the people, the tourists, backpackers, campers, that were being outfit-

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ted into the area by organized outfitting services that seemed to be a problem.

Let me say, then, that if you eliminated those people from the forests or restricted them highly, but oil and gas exploration went on and it was very controlled as relates to the kind of things that bother bears, and we know that once they are there the discovery is made and if successful, it is piped out and they are gone except in a limited degree, I don't in my own mind honestly see that as much a conflict as the heavy concentration of people into the area.

I am wondering why, people as the current problem, but you say careful with the oil and natural gas or exploration, when it appears from the people side of the bear problem that that would be greatly more limited than would be the ongoing or multiplying factor of people coming into that area for camping, and recreation, and all that.

I am sorry I got long winded but do you see my point, Mr. Chairman?

Mr. **Seiberling**. Can you answer that, whoever wants to?

Mr. **Povilitis**. I would like to take a crack.

Mr. **Craig**. I guess I should say in 5 seconds or less.

Mr. **Seiberling**. We still have three panels, I would remind everybody.

Mr. **Povilitis**. I think you have a very, very good point, the issue is what is precipitating excessive grizzly mortality. Will it come from an oil or gas exploration rig or will it come from a new development on the edge of the national park? That is why I strongly recommend that an overview of what is killing grizzlies is done. That could perhaps be done through an EIS of some type.

Mr. **Craig**. Thank you.

Mr. **Seiberling**. Mr. Varley, what do you say about what Mr. McNamee and Mr. Povilitis have said? Mr. McNamee says his model shows that the 100-year model indicates the extermination of the grizzly bear.

Mr. **Varley**. That is accurate. I believe Mr. McNamee is submitting a paper done by the interagency grizzly bear study team that worked for us. And basically we have two things, one is that on a 30-year basis we might get down to a point where the grizzly bear population is in fact endangered, not threatened any more, but endangered, and the rate of decline is so slight right now that what we are saying is that the Interagency Grizzly Bear Committee effort can arrest that and if we cannot, then we can still do something different in plenty of time before that bear population gets into some kind of a critical level.

Mr. **Seiberling**. Well, my other question would be, what different does it make? Maybe we should write off the grizzly bear as far as Yellowstone is concerned, decide the people really want to enjoy this park as much as they seem to and they don't seem to be as interested in grizzlies as they do in the other features.

Let's forget about the grizzly. It is a damn nuisance so why bother with it? What is the matter with that approach?

Mr. **Varley**. Well, you would have to change a lot of the laws.

Mr. **Seiberling**. Forget that the law says you have to protect it. We have been writing the laws; maybe we should rewrite the law.

Mr. Varley. I don't think the National Park Service would view that as a very palliative approach.

We want to keep the bear and keep it very populace.

Mr. Seiberling. Isn't it a nuisance? It scares you to death when you walk around the park and they occasionally kill someone or occasionally a bear gets killed, and it is a real, tough problem.

Why don't you just get rid of the problem, get rid of the bears?

Mr. Eno. Mr. Chairman, for—excuse me, for everybody who feels the bear is a nuisance I think you would find people who would be just as happy to see one and who go to Yellowstone to see them. Beyond that if——

Mr. Seiberling. Why not take a survey, Mr. Barbee, of all the visitors to the park and find out whether they really give a damn about the bears? Wouldn't that tell us something? If a lot said they thought we ought to preserve the bears, that would indicate it was worth doing. If most of them say they didn't care if they ever saw a bear and maybe they would rather not, then that puts it in a different light.

Then we simply have a question of the preservation of species and a determination of whether it is important to all the other species there that we preserve the bear. I suspect it would not be. We might as well ask all the questions here and that is one of them.

Mr. Eno. In terms of historical perspective and possibly the future perspective, if we recover the bear, the bear is an important commodity for the recreation and outfitting community. And we may not be that far——

Mr. Seiberling. You mean for hunting.

Mr. Eno. Eventually, yes, if it is recovered. The population will go back for management to the State, and it can again become a game species. That is really the ultimate objective.

Mr. Seiberling. Well, the thing that bothers me is that you are putting a game species, the same is true at Glacier National Park, right in the middle of a huge, tourist attraction. It seems to me those two are inherently incompatible and at some point one or the other is going to have to give.

Mr. Eno. It is really not. You have bear populations around the world, you have grizzly populations in Greece, Italy, Spain.

Mr. Seiberling. Grizzly populations?

Mr. Eno. Yes; the very same critter. The bears are behaviorally adaptable and again, if you have a healthy population and if you had a hunting program, there are many that make the argument that the problem bears will be removed by the hunting program.

Right now, as Tom stated, you have two problems that are impacting the grizzly, but these are the problems that Audobon has been working to address, it is illegal taking and garbage. Once we remove the garbage and control the illegal taking, we may be in a much more positive situation.

Mr. Seiberling. Mr. McNamee and Mr. Povilitis, do you agree that grizzly bears live in Spain.

Mr. McNamee. They are not really grizzlies. They are Ursus horribilis, the grizzly here. In Europe, it is Ursus artos artos.

Mr. Seiberling. I thought they were quite different.

Mr. McNamee. They are psychologically different.

Mr. Seiberling. I thought they were more like brown bears.

Mr. McNamee. Grizzlies are brown bears.

Mr. Povilitis. They are brown bears in the same species, but they are behaviorally quite different.

Mr. Seiberling. That is what I mean.

Mr. Povilitis. Also the brown bears here are about the same as black bear size in Europe. If the future of the grizzly, the great bear in North America, is to screen out the more aggressive, the more wide-ranging individuals of the population so that we are left with a remnant that resembles the European brown bear, I think that is a very, very sad state of affairs.

That seems to be what we are heading toward.

In answer to your question or at least in comment to your question about what values are, it is ultimately a matter of esthetics and fairness. Here is a species that range throughout the American West and we would have to ask the American citizenry whether it is fair indeed to eliminate it from the American West.

The other aspect of it is esthetics. What we are talking about is an enriched life, a high quality existence for people as well as other forms of life. What most of us react to when we react to the grizzly, sometimes it is fear, but there is an element of beauty to that fear, believe it or not, and there is a tremendous beauty to knowing there is a grizzly there, to seeing a grizzly on the side of a mountain with her cubs.

It is a species that I don't think you can quantify or put in political terms.

Mr. Seiberling. We have had grizzlies in Alaska for a long time and probably in Canada, so why worry about them in Glacier and Yellowstone National Parks?

Mr. Povilitis. I think Aldo Leopold, the father of wildlife biology in this country, had an answer to that. He said that relegating grizzlies to Alaska is like relegating happiness to heaven. That is the way I think the majority of the people that know the grizzly bear feel.

Mr. Seiberling. I think it would be interesting to conduct a survey and if we found that most of the tourists didn't give a damn, that would tell me something about how much trouble we ought to go to to protect the grizzly bear.

Mr. Craig. How do you take 4 million people a year coming into the relatively small area out there, and expect to be able to manage it properly? If you ask the question the chairman has posed, do you ultimately say that to maintain a grizzly population in this area, we will have to say to the 4 million people sometime in the future possibly, sorry, you have to narrow your numbers to 3.5 million, or 3.2 million, or 3 million, or put a ceiling of 4 million visitors a year and no more—that becomes the obvious question.

If it is a people impact, a people-management problem that has created the bear-management problem, there are just an awful lot of questions to be asked and certainly a few that deserve to be answered, and I know that I guess I wanted to say I would fight to keep some grizzlies.

Mr. McNamee. I think maybe we will eventually hit an absolute limit, Mr. Craig, of individuals allowable in the ecosystem, but I think it is a long way off. It is a matter of really apportioning the impacts and keeping an eye on the cumulative impacts of all human uses of the ecosystem, oil and gas, timber cutting, recreation, hunting, and so on.

And if there were some means for seeing the whole picture which currently there is not, then we could manipulate these impacts in such a way that the bear fits right in. That is not the case right now.

In fact, the case is precisely the opposite, conflict after conflict. It is not necessarily a matter of numbers. It is type of use and intensity of use and place and time.

Mr. Seiberling. I just think that we have to ask ourselves the ultimate question, the other alternative is to say we will set aside Yellowstone for bears and keep the people out. That is obviously not going to happen, so the alternative is maybe we are going to have to eliminate the bears or let them die out.

But I guess there is no final answer to that, and I don't expect anyone to supply it.

Well, thank you very much. We must move along. It was very interesting. We could discuss this I am sure all night.

Our next panel consists of Mr. John Arlidge, and Mr. Gary Langley. Mr. Arlidge of the Western Regional Council, and Mr. Langley of the Montana Mining Association. Executive director Mr. Langley.

Let's combine Mr. Arlidge with the next panel, if Mr. Langley is not here, Mr. James Riley, Inter-Mountain Forestry Services; Mr. Mike Welling, Idaho Forest Industries; Mr. Richard Reid, Inland Forest Resource Council; and Mr. Mark Simonich, Montana Eastside Forest Practices Committee.

Mr. Arlidge, is that you.

[Prepared statements of John Arlidge, James Riley, Michael Welling, Richard Reid, with attachment, and Mark Simonich may be found in the appendix.]

PANEL CONSISTING OF JOHN ARLIDGE, WESTERN REGIONAL COUNCIL; JAMES RILEY, INTER-MOUNTAIN FORESTRY SERVICES; MICHAEL WELLING, IDAHO FOREST INDUSTRIES; MARK PAWLECKI, REPRESENTING INLAND FOREST RESOURCE COUNCIL; AND MARK SIMONICH, MONTANA EASTSIDE FOREST PRACTICES COMMITTEE

Mr. Seiberling. Mr. Arlidge.

Mr. Arlidge. Thank you, Mr. Chairman.

I am John Arlidge, vice president of the Nevada Power Co.; however I am here today representing the Western Regional Council as their chairman of the Park Protection Committee.

Western Regional Council is an organization of some 43 companies in the Inter-Mountain West representing various activities, business activities such as financial, mining, utilities, investment, construction, transportation, accounting, oil and gas, et cetera.

Western Regional Council members are neighbors of many of the Nation's largest and most beautiful parks. We also understand the natural forces that created many of the features of the parks, also created and made accessible many of the natural resources critical to our Nation.

We appreciate this opportunity—excuse me, Mr. Chairman, but I scratched so much here to cut down, that I am trying to find out where I scratched and what I kept.

Suffice it to say, I think the easiest way to do it is do it as fast as I can. We believe Congress and the administration should adopt a case-by-case approach in addressing the problems facing the national parks. The council accepts this hearing as focusing on specific needs of the Yellowstone Park and therefore implementing that case-by-case approach.

Second, the council states that debates must focus on actual research, and facts, and not on some threats, or allegations of threats.

Three, we are concerned about the tendency of the term "threats." These alleged things which happen which nobody seems to have any facts, figures, or tries to support. The catchword phrases of ecosystems, et cetera.

Four, the Western Council believes that Congress and the administration should look at internal solutions first, without looking at additional legislation. To be quite honest with you, as you gentlemen know, we have not caught up with promulgation of regulations that you have passed 4 years ago. Yet, in addressing park-related concerns, the council believes it is critical that the Federal authorities work with the State and local authorities.

The local people are a very integral part of any so-called ecosystem we are looking at.

I guess, finally, I have lost my page in all these scratchings. I would like to say we are very happy with what the chairman said earlier that he is not looking for ecozones or buffer zones and that he is going to start looking at each of these situations on a case-by-case basis, and the council certainly supports such an attitude.

Thank you.

Mr. SEIBERLING. Well, thank you.

Mr. Riley.

Mr. RILEY. Mr. Chairman, I am James Riley, I am the executive director of Inter-Mountain Forestry Services. We are a trained association representing forest products firms in southern Colorado, Utah, Idaho, and I am here representing my trade association and the National Forest Products Association on this matter.

Much of the discussion we have heard today over the threats to both Yellowstone National Park and the surrounding area reflect a concern that the natural resources, both within but also outside Yellowstone Park are threatened as a result of incompatible activities carried out by the Federal Government. This rests on the assumptions that existing statutory regulatory mechanism for protecting resources in this area are inadequate.

We cannot share this assumption. In our view, existing mechanisms for protection of resource values in the Yellowstone area are already provided for through the requirements of the National Environmental Policy Act of 1969, the National Forest Management Act of 1976, the Endangered Species Act of 1973, the Clean Water Act of 1977, and the Clean Air Act of 1977, along with a host of other existing statutory and regulatory provisions.

Each of these statutes contains specific requirements for the protection of special areas and/or resources. My written statement I submitted for the record reviews each of these laws in specifics, and I won't delve into them at this time.

The next speakers on our panel will have specific to specific situations of Forest Service action, which do respond to these requirements.

I would, however, like to emphasize that the Forest Service regulations which are requirements for forest land management planning require that they are conducted by interdisciplinary teams that can integrate the knowledge of the physical, biological, economic and social sciences to achieve multiple uses.

Importantly in this case, the regulations also specifically require that the team and I quote, "implementing the planning coordinate activities with Forest Service and with local State and other Federal agencies."

Thus, both the Park Service and the Fish and Wildlife Services must be consulted when planning is undertaken for Forest Service lands contiguous to units they manage.

I would also like to comment that the forest products industry has and is continuing to work with the Forest Service through the MFNA planning process. We are committed to this effort to the concept of multiple use and have and will continue to work very hard to seek ways to implement timber harvest programs which are compatible with all other resource uses while continuing to provide economically viable timber supplies to our sawmills and to communities which are dependent on them.

We believe that a positive and innovative approach to forest management on public lands will provide the balance that was referenced by so many speakers today, and what we need at this time is a similar commitment from all other forest users, not additional legislative or regulatory restrictions.

Given the exhaustive list of statutory and regulatory requirements for Forest Service coordination with other agencies, it is difficult to fathom how the Forest Service could do any more, unless the intent of the current debate that we are having today is to set the basis for expanding the size of the national park to include all public lands within the so-called Great Yellowstone ecosystem.

We certainly would be opposed to such a proposal.

Based on these requirements, we have conducted a detailed review of the national forest plans for the forests surrounding the Yellowstone Park, we have also reviewed individual timber sales which are 9 in number, that are included on the list of alleged threats to the ecosystem, and also the additional witnesses on this panel will speak directly to our findings in these areas.

I will conclude by noting that insofar as the activities in Yellowstone area are concerned, existing requirements provide appropriate protection for the important natural resources.

I would also like to extend the invitation if you so desire, we would be pleased to conduct a field tour for the subcommittee members and staff, to observe and evaluate the timber management activities in the area known as the so-called Greater Yellowstone Ecosystem, and we would do our part to further any understanding in that regard.

Mr. SEIBERLING. Thanks very much.

Mr. Welling.

Mr. **Welling.** My name is Mike Welling, resource manager for Idaho Forest Industries.

We operate a mill in St. Anthony, ID, which is 80 percent dependent upon timber from the Targhee National Forest which borders Yellowstone National Park.

Our mill is the only major industry in St. Anthony, employing over 100 employees. Any restriction of the timber supply from the national forests in the so-called Greater Yellowstone Ecosystem would have a substantial effect on our company and the town of St. Anthony.

I have reviewed the supporting documents for all the timber sales in the forest released by the Greater Yellowstone Coalition. All of these are contained in my written testimony, and I will just briefly talk about some of these here.

These documents clearly indicate that: One, timber harvest decisions are made only after giving careful consideration to the impacts of nontimber resources.

Two, timber harvest activities are designed to mitigate these impacts, and; Three, the Forest Service undergoes an extensive review process to insure that timber sales activities are compatible with the objectives of local, State and other Federal agencies.

Forest plans are designed by law to recognize both the commodity and noncommodity resources of the national forests.

For example, the Beaverhead's draft plan proposes an average annual harvest of about 21 million board feet of sawtimber per year over the next 10 years.

Timber production will be the primary management emphasis on only 9 percent of the forest's total land base. But achieving this harvest level will actually involve timber harvest on about 1.6 percent of the forest over the next 10 years.

Fifteen percent will be designated as wilderness. An additional 52 percent of the forest will be managed under a "roadless management emphasis."

In total, 67 percent of the forest will be managed for activities which preclude timber harvest.

Even on those parts of the forest scheduled for intensive timber management, land management prescriptions are designed to mitigate the potential adverse impact of timber harvest activities on other resource values. Timber sale projects often contain special activities designed to protect or enhance nontimber resources.

For example, the poacher's trail sale on the Targhee National Forest—which is also on the coalition's threat inventory—will salvage 340 acres of dead, dying, or diseased timber in western Wyoming.

This sale area lies within Situation 2 Grizzly Bear Habitat. Maintaining the production of huckleberries was identified as the major issue of the project.

Of the four alternatives developed, the alternative chosen had the lowest timber harvest—only about 69 percent of the highest alternative.

The following mitigation measures were applied to all alternatives: closing all new roads; designing cutting units to imitate natural openings to reduce visual impact; restricting harvest activities to protect riparian areas; following the Greater Yellowstone grizzly bear guidelines.

To enhance grizzly bear activity, regeneration activities were modified to insure that huckleberry production would remain high.

This preferred alternative would have no significant negative impacts on the grizzly bear. Elk habitat quality would remain unchanged. Mule deer and moose habitat would increase.

To achieve this alternative, the Forest Service consulted directly with: Edward Hines Lumber Company; Louisiana-Pacific Corporation; Idaho Environmental Council; Wyoming Game and Fish Commission; Sierra Club; Idaho Conservation League; Idaho Forest Industries, Inc.

In conclusion, this record demonstrates that; One, the Forest Service has discharged the complex responsibilities described by the previous speaker, and; Two, timber management in the Yellowstone area is, if anything, overly conservative.

In fact, as the final speaker on this panel will illustrate, there is a serious question whether the Forest Service's timber management program will sustain the dependent communities in the area.

Thank you.

Mr. SEIBERLING. Thank you, Mr. Welling.

Mr. Reid.

Mr. PAWLICKI. Mr. Reid wasn't able to be here today. I will be fillng in for him. Could I give his testimony for him?

My name is Mark Pawlicki, director of Federal Timber Sales Programs for the National Forest Products Association in Washington.

I will be presenting Mr. Reid's testimony on behalf of the Inland Forest Resource Council.

The Inland Forest Resource Council is an association representing manufacturers of solid wood products in western Montana and northern Idaho.

The industry in this region processes an average of 2.5 billion board feet of wood products each year.

The timber industry accounts for the biggest share of the economic base of western Montana and northern Idaho.

The previous two speakers focused primarily on issues involved with the management of lands surrounding Yellowstone National Park.

I concur with their view that existing resource and environmental protection programs are more than adequate to address any threats to this area.

Moreover, management, public, and environmental concerns about Yellowstone and the other parks within the system are currently being addressed through a program initiated by the National Park Service.

We support the plan developed by William Penn Mott, the director of the Service.

The plan focuses on the development of a long-range strategy to better protect natural, cultural, and recreational resources within the national parks.

In fact, this is the first point in the director's overall 12-point package. The other 11 points are listed in Mr. Reid's written testimony.

The Park Service plan also addresses issues and concerns about areas outside of current national park boundaries. We agree with Director Mott's notion that the highest priority in protecting the parks is to assure proper management of those lands within the system.

Where necessary, expansion of the park system can be carried out through innovative acquisition techniques, such as those that Mr. Mott described in his testimony today. At no point does he call for new legislation.

Additionally, the Secretary of the Interior has established a park protection working group, composed of representatives from four land and resource management agencies, which has agreed to look at park protection in the context of: One, how to anticipate conflicts; Two, how to avoid conflicts; and; Three, how to resolve conflicts.

We believe that this process will help resolve many of the conflicts that currently exist between the various land management agencies.

In conclusion, we support the 12-point plan developed by Director Mott and the appointment of an interagency working group to resolve differences.

The agency's commitment to seek public involvement in its decisionmaking processes, in conjunction with the new program initiatives outlined earlier, will establish a mechanism to assure protection and proper management of our national parks, preserving them for future generations.

I appreciate the opportunity to offer our views on this matter. I would be pleased to respond to any questions that you have.

Mr. SEIBERLING. All right. Thank you.

Mr. Simonich.

Mr. SIMONICH. Good evening. My name is Mark Simonich. I have come here today from Livingston, MT, to represent the Montana Eastside Forest Practices Committee.

The Eastside Committee is dedicated to monitoring and promoting wise and efficient uses of the National Forests and their many resources.

I appreciate the opportunity to offer my views to the subcommittee.

My interest in speaking to the Greater Yellowstone Ecosystem issue stems from a concern about my future and my children's future. I would like to be assured that my children are able to enjoy all of the benefits of our national parks and forests.

I am a conservationist, and because of my belief in conservation, I have studied and taken up a career in forestry.

The management of lands in the Yellowstone area has a direct effect on me and my family. My employer, Brand-S Corporation, is to a large degree dependent on national forest timber for its livelihood.

Roughly 50 percent of the timber supply for its Livingston Mill comes form the Gallatin National Forest, which adjoins Yellowstone National Park.

An additional 35 percent comes from the Beaverhead National Forest and nearby private lands.

I feel that these national forests are, if anything, currently managed more conservatively for timber production than they should be.

For example, even though 23 percent of the Gallatin's Lands are considered suitable for timber production, only 5 percent are managed to optimize timber growth.

Any additional restrictions could seriously jeopardize the small timber sale program that currently exists.

To illustrate the situation, the Gallatin National Forest currently has an annual timber sale program of 25 million board feet.

This is down in recent years from 32 million board feet. However, in its draft 10-year plan, the Gallatin will produce only 21 million board feet annually.

According to the Forest Service, this will probably be reduced to 17 million board feet because of the new grizzly bear guidelines and other environmental constraints that the agency is presently considering.

Thus, if the Gallatin National Forest produces only 17 million board feet under the new forest plan, it will likely reduce Brand-S's timber supply by 25 percent.

In Livingston, Brand-S employs 110 people directly and approximately another 150 people through logging contractors, road builders, and truckers.

Our employee payroll is $2.7 million annually, and our contractor payroll is $4.3 million. We are the third largest private employer in Livingston.

Our continued operations are dependent upon a reliable source of raw material in the face of significant restrictions in the local timber supply.

Historically, Brand-S has obtained its entire timber supply in and around the Gallatin National Forest. Because of reduced timber sale programs we have been forced to extend our area of operations.

We now purchase timber on five national forests. As a direct result of extending our operating area, Castle Mountain Corporation, of White Sulphur Springs, MT, closed permanently in October 1983, laying off 85 people.

Many of these people were forced to leave the area because the mill had been the town's only industrial employer. We cannot stretch our operating area any further. To do so would be economic suicide.

Beyond the current restrictions on timber management on public lands, I am concerned that timber management activities on private land will be impeded if the entire Yellowstone area is preserved.

The Forest Service's lack of an aggressive program to stop the spread of the mountain pine beetle has devastated thousands of acres of national forest lands.

Additional management contraints on private lands would further exacerbate this and other problems that we currently face.

Throughout the growth and development of the area surrounding Yellowstone Park, timber harvesting has played a key role in the economic stability of nearby communities.

Today, when one mentions Yellowstone Park and its surrounding communities, many tend to think of recreation and tourism.

While these play an important part in the existence of these communities, they are not our sole lifeblood, nor have they ever been.

The timber industry today is a conscientious operator in the Yellowstone area, and must continue to be for a stable economy and employment base to continue to exist.

As a resident of the Yellowstone area, I am deeply aware of my responsibility to protect its unique natural resources.

Indeed, the quality of life they afford is the reason that my family and I make our home in this part of the country.

At the same time, I believe that many of these resources can and should be properly managed on a sustained basis to provide goods and jobs necessary to support our local economy.

Even a cursory review of the area's history supports this proposition. In our deliberations about the Greater Yellowstone Ecosystem, we must not forget that man is also an integral prat of the ecosystem.

Thank you.

Mr. **Seiberling**. All right. Thank you.

Mr. Cheney.

STATEMENT OF HON. DICK CHENEY, A U.S. REPRESENTATIVE FROM THE STATE OF WYOMING

Mr. **Cheney**. Thank you, Mr. Chairman.

I would simply like to thank the panel. Your patience is admirable, and you obviously are equipped to sit for a very long period of time.

We have a name for the chairman of the subcommittee that I won't repeat in his presence, but he is noted for his ability to wade through these hearings and last all day, and I appreciate your taking the time and your willingness to testify.

I think your testimony is important.

Thank you very much.

Mr. **Seiberling**. Thank you.

Mr. Craig.

STATEMENT OF HON. LARRY E. CRAIG, A U.S. REPRESENTATIVE FROM THE STATE OF IDAHO

Mr. **Craig**. Very briefly, Mr. Chairman—I appreciate the panel's patience in waiting, as my colleague from Wyoming has mentioned.

One of the things that has been said here today by the Forest Service and by others—and we know with the history of Yellowstone Park that it was kind of put down in the middle of things, but especially put down in the middle of a vast acreage of public land, partly because of the uniqueness of the area, but also there was thought that it served the public land around it, served kind of as a protection area to provide some degree of protection, certainly of Yellowstone Park proper itself.

When I look at the forests involved here and concern for management practices on them in the Shoshone Forest, how much of it in the current forest plan, proposed plan, would be left in a nonroaded or wilderness nonuse status?

Can anyone respond to that?

Mr. WELLING. Under the draft plan on the Shoshone, almost 75 percent of the forest will be managed as either wilderness or unroaded area, at least in the first decade.

Mr. CRAIG. Seventy-five percent in the Shoshone.

What about the Gallatin under the proposed plan?

Mr. WELLING. The Gallatin is just about the same. It is going to be about 72 percent. Forty-three percent of that will be wilderness under the draft plan.

Mr. CRAIG. Forty-three percent, but the other balance of around 70 percent will be nonroaded type situation?

Mr. WELLING. The remaining 30 percent will be under the wilderness recreation designation.

Mr. CRAIG. What about the Beaverhead?

Mr. WELLING. The Beaverhead is about 67 percent, with about 15 percent of that being actual wilderness, and the rest roadless recreation and road classifications.

Mr. CRAIG. What about the Targhee?

Mr. WELLING. The Targhee will be about 50 percent. It will only have about 10 percent wilderness. The rest will be unroaded. It is about the only forest with a massive beetle kill problem to house on it.

They have got an active Timber Sale Program to try to salvage the dead and dying timber there.

Mr. CRAIG. How about the Custer?

Mr. WELLING. I am not too sure. There is a lot of grassland in that. How much would there be on the Custer? I am not too sure on the Custer. I don't think it is a very large number, because basically, the Custer—basically about 7 percent is going to be managed only for timber production.

Mr. CRAIG. For timber production only?

Mr. WELLING. For timber production. The Custer is a strange forest, because half of it is in the grasslands and half of it is in the forest.

Mr. CRAIG. I guess the point I am attemptimg to make here, is it fair to say that that area surrounding the park today under proposed management plans, that at least 60 to 65 percent of that area will be managed as wilderness or unroaded natural State-type management?

Is that what it appears as the direction that the Forest Service is headed in?

Mr. WELLING. I think that is a very, very safe number.

Mr. CRAIG. Thank you.

Thank you very much, Mr. Chairman.

Mr. SEIBERLING. I would just like to ask a couple of questions.

Do you gentlemen, any of you, have any objection to the idea that the various land management agencies in and around Yellowstone Park ought to try to sit down and coordinate their decisionmaking process?

Is there anything wrong with that?

Mr. RILEY. No, sir, Mr. Chairman.

We support the coordinated decisionmaking among the Federal agencies involved.

Mr. Seiberling. How about coordinating it with the local and State authorities, too?

Mr. Riley. Yes; we support that as well.

Mr. Seiberling. Anybody else?

Mr. Arlidge. I think, Mr. Chairman, certainly the Federal Land Management Policy Act requires that.

Mr. Seiberling. But that is just one agency, the BLM.

Mr. Arlidge. It is also the Department of Agriculture.

Mr. Seiberling. No Federal Land Management Policy Act covers the BLM. The National Forest Management Act covers the national forests, so the question is, shouldn't they try to sit down where they have got common problems in an area like this and coordinate their processes?

Mr. Arlidge. Certainly the chairman knows more about the acts than I do. I think a number of the sections require both those Agencies to work together, and I think that they have done so in our area.

Mr. Seiberling. You may be right. I am one of the authors of the act, but it is possible I have forgotten some of the provisions of it.

Mr. Riley. Mr. Chairman, I cite the relevant part of the National Forest Management Act in my testimony that does specifically provide and requires the Forest Service to coordinate its actions.

Mr. Seiberling. Perhaps my mental lapse is because it has been honored more in the breach than in the observance, but in any event, I am glad you mentioned it, because it is a good point.

We will throw that at them, too.

Yes, Mr. Cheney.

Mr. Cheney. Mr. Chairman, I wanted to ask just one question of the group. One of the complaints that we hear from time to time is that we have got forests that were reporting, in effect, to three different regional offices: Missoula, Ogden, and Denver.

How would industry feel about a situation that maybe consolidated management for this area with respect to the Forest Service in the one single regional office, so you wouldn't have to deal with three different regions?

Would that be more efficient? Would you welcome that sort of thing?

Mr. Riley. I would certainly express an openness to examining a proposal that would be made along that line, as we did with the current land exchange proposal that is on the table right now.

I would have to say, though, that the nature of our interactions with the Forest Service and that of our members is also developed in a very close working relationship with the people on the ground.

Whenever there are proposed changes to that, our members tend to get a little bit anxious, if you will, about what it is going to mean to have to deal with a whole new set of people, have to learn new ways and that sort of thing.

I would be a little out on a limb to enforce that.

Mr. Cheney. I realize it is speculative. I just wondered if you had noticed whether there is a fundamental difference between each of those regions. Do they operate differently, for example?

Mr. Riley. Currently, right now, I represent companies who operate in both regions, and I operate in both regions as a trade association, and we find very little difference in coordinating our activity which one regional office has as another, once you establish the communications guidelines.

Mr. Cheney. Thank you.

Mr. Seiberling. Second, is there a shortage of timber currently in any of your areas?

Mr. Riley. Yes, Mr. Chairman. There is, particularly in the town of Dubois, WY. We have a very serious problem there, and I am sure Congressman Cheney would probably not like to hear from me much on that topic at this time, but yes, we have a mill with a pending closure maybe as early as April this year, all because of the inability to deliver logs to that facility.

Mr. Seiberling. That is an unusual situation in the timber industry these days, because in most places the problem is that they can't sell all that they already have available.

Well, thank you.

Mr. Craig.

Mr. Craig. One question that was prompted by one of your comments. Is there any indication from your working with the Forest Service whether there have been actual changes in plans based on interagency review and activity?

Can you cite an example, or do you know of any examples?

Mr. Riley. Yes. What particularly comes to mind is forest plans in particular, and if I might move to an example on the Payette National Forest, that plan, particularly with regard to the fisheries and considerations in the south fork of the Salmon River, the interagency review which is quite extensive in that particular case with the State fishery and game agencies, with the Columbia River Basin authorities and the intertribal councils and the numerous other agencies regarding the recovery of anadromous fisheries. And the plan was very carefully tailored to respond to all of the concerns raised by all of the agencies.

If we find the same types of activities taking place in the Bridger-Teton National Forest with the Park Service and everybody else involved—of course, the plan is not developed yet, so I can't point to evidence where that occurs.

Mr. Craig. But you are seeing that and feeling that kind of activity going on?

Mr. Riley. Yes. In fact, I couldn't pass up the opportunity to comment that we have registered objections sometimes with the Forest Service as to their zealousness to respond to the concerns of State fish and game agencies—almost it takes precedence over responding to the concerns of maybe some of the more local public groups or the special interest groups—and it is not balanced correctly in that regard.

Mr. Craig. Thank you.

Mr. Seiberling. Thank you.

I want to thank this panel.

Mr. Seiberling. We will now proceed to the last panel: Mr. Matt Reid, Montana Wilderness Association; Mr. Len Sargent, rancher, Montana, Yellowstone Rim Alliance.

I am sorry it is so late, gentlemen.

All right, Mr. Reid.

[Prepared statements of Matt Reid, with attachment, and Len Sargent, with attachments, may be found in the appendix.]

PANEL CONSISTING OF MATT REID, MONTANA WILDERNESS ASSOCIATION; LEN SARGENT, RANCHER, MONTANA, MEMBER, YELLOWSTONE RIM ALLIANCE

Mr. REID. Congressman Seiberling, Congressman Cheney, and Congressman Craig, my name is Matt Reid.

I am from Bozeman, MT, just to the north of the Yellowstone Ecosystem.

I am a wildlife biologist and am here on behalf of the Montana Wilderness Association and the Montana Wildlands Coalition.

These two groups are representative of approximately 20,000 Montana wildland enthusiasts and advocates—backpackers, fishermen, hunters, naturalists, mountain climbers, horsepackers, and wildlifers—people who advocate wilderness protection for the last vestiges of Montana's roadless area resource.

I am here to give testimony on the prospects of a national expression of a land ethic. The idea was first formalized by a truly great visionary—Aldo Leopold—who stated that a land ethic simply enlarges the boundaries of a community to include soils, waters, plants, and animals, or collectively: The land.

Today, I see a necessary and national application of Leopold's idea, the land ethic, to one of our country's truly spectacular land communities—the Greater Yellowstone Ecosystem.

There has been a lot of testimony today, and I have submitted formal testimony that you can read. I want to digress just a little bit from that.

I would like to say that our groups are very supportive of the upbeat solutions-oriented approach that the Greater Yellowstone Coalition has taken in our area. We see a bright future for the Yellowstone Ecosystem that can include all the uses.

We have some concerns about priorities. We believe there should be a shift that looks for the future of what the bright spots in our region are.

In my particular area, I have had a lot of experience in the field as a wildlife biologist dealing with this critter we have been arguing about today: The grizzly bear.

I have handled the bear, looked at him directly in the face. I have been around the bear for a long time.

In the Gallatin National Forest, I see some very real solutions to the bear problem, some specific ones, and I would just like to mention them.

I would have to say that protection of the Gallatin range is absolutely critical. Gallatin is in the wilderness study area right now, and I see the best protection for critical grizzly habitats in the Gallatin range as designated in it as wildernesses.

I would also like to mention that the Lion's Head wilderness, which is fairly close to the Gallatin Range, adjacent to Yellowstone National Park—it would be very important that that area be protected, too, and there is some support from the USDA Forest Service on that particular issue.

There are four very critical areas; The fishing bridge area in the center of the park and the Ski Yellowstone right on the border of the park there, just north of West Yellowstone, are perhaps at this time the major threats in our area to the grizzly bears' survival.

They need careful consideration. I have been involved in the issue of Ski Yellowstone personally for about 11 years now.

I would like to see an end to it.

The other thing is this whole idea of grizzly and logging. I guess I would also like to submit some testimony, if you will accept it, on behalf of the Defenders of Wildlife Group. I won't read the testimony, but if you would accept it, I would appreciate it.

Mr. SEIBERLING. Without objection, we will include that in the record.

[EDITOR'S NOTE.—The above-mentioned testimony may be found in the appendix. See table of contents for page number.]

Mr. REID. Thank you very much. It has been a long day.

Mr. SEIBERLING. Thank you.

All right. You are going to bring up the end of this procession, Mr. Sargent. That is a very important slot.

Mr. SARGENT. Thank you, sir. I didn't know I would ever be an anchorman. It puts a new meaning on the word, however.

Thank you, Mr. Chairman and members of the committee, for this opportunity to testify before you regarding the Greater Yellowstone ecosystem.

My comment on the earlier testimony is a general one. I think I, at least, have learned that when you ask an agency if everything is just dandy, you get an answer, "It certainly is," and if you ask two agencies whether they are going to cooperate, you get the answer, "yes, we do, and we are and we will."

The only trouble is it took 5 hours, and I don't think that that is very accurate.

I am Leonard Sargent and have ranched for the past 24 years just north of Yellowstone National Park and west of the Yellowstone River.

I have been involved in conservation causes in the northern Rockies for many years, serving on the boards of MWA and RAG, EIC, Public Lands Institute, and presently the NRDC, and the Northern Yellowstone Rim Alliance.

I am particularly proud to have been one of the founding members of the Greater Yellowstone Coalition.

While I cannot claim to be a third-generation Montanan, I am proud that a relative of mine, Nathaniel P. Langford, was one of the six Bozeman businessmen who, while camping on the Madison River, decided that the lands surrounding them were so unique that they should belong to all the people of the USA for their enjoyment forever, and thus was conceived the historic idea of a "national park."

Langford himself spent considerable time in Washington from then on, in order to sell the idea to Congress and President Grant, and he, in fact, became the first superintendent of Yellowstone—unsalaried, I might add, sort of like ranching.

It is interesting to note that even then, considerable opposition came from local people with special interests—words such as, "It is a lock-up," and, "It will be an economic disaster," were used frequently.

I think the park really has turned out pretty well, and it is probably the bigger asset economically to that part of the State and to other States.

Personally, I have hunted, fished, hiked and enjoyed this whole area for over 30 years. My wife and I have felt so strongly about the special attributes of our small part of it that we gave a conservation easement on our ranch to the Nature Conservancy to ensure the preservation of its wildlife, habitat and other priceless resources in perpetuity—no subdivisions or other buildings, no commercial timbering or hunting nor shooting or anything except deer and elk.

Because of our proximity to the northwest bulge of YNP, we have been very conscious of being a part of an ecosystem. We share with the park deer, moose, bighorn sheep, elk and numerous smaller animals and birds as they wander back and forth between us—in particular, grizzly bears, which use our area year-round because of its excellent habitat, even for denning.

Mr. Seiberling. You have had 3 minutes, but go ahead.

Mr. Sargent. We run cows and horses the year round, and neighbors have sheep, pigs, pigeons, chickens, etc., and, in 25 years, we have lost two cows to lightening, four to bullets and just possibly one to a grizzly.

We all enjoy having grizzlies around all year, except in deep winter. We don't bother them, and they don't bother us. Many old-timers will give you the same philosophy about living with coyotes.

However, too much public access, oil and gas leasing and/or exploration, timbering, mining, etc., would destroy grizzly habitat and shrink their living area even further, causing more human/bear conflicts and detrimental impacts.

Perhaps my ancestor and his friends should have pressed for a larger park, but the ecosystem idea was not understood as well in those days, and it is now too late to change the boundaries, though not the management of the ecosystem.

I have been asked to testify today by the Greater Yellowstone Coalition and by the Northern Yellowstone Rim Alliance, one of the coalition members.

The issues, however, are so important that I would have come to this hearing anyways, and I am paying my own way.

The NYRA refers to land, part Forest Service and part private, bordering the northwest bulge of Yellowstone National Park, where the Gallatin National Forest would like to condemn at great expense additional accesses through the private properties to reach a narrow strip of FS land adjoining the park for the most part.

It was mentioned earlier this was a lock-up, and the public couldn't get through. There are more details on this. I will just say as it is now, almost 90 percent of the FS sections can be reached for quality hunting without trespassing on park or private lands.

In some cases, the distances are long—zero to 10 miles—and difficult, but that is why the habitat is so outstanding and the hunting of such excellance.

Also, it is these circumstances that result in possibly the best grizzly bear habitat in the entire ecosystem, used, as I have mentioned, throughout the year.

I would go on with a suggestion for proceeding, but I have used up my time, and it is in my written testimony.

Thank you very much, again.

Mr. **Seiberling**. Thank you, and thank you for the excellent map that accompanies your statement.

I just have one question, basically.

In Mr. Welling's testimony, which was very extensive and must have taken a lot of work, he quotes from the Gallatin National Forest draft management plan, which under the heading of "Grizzly Bear Recovery," he says, "approximately 43 percent of the land within the Gallatin has been identified as occupied habitat for the grizzly bear. All current and proposed activities on the Gallatin will be reviewed to determine their potential impact or threat to endangered species. Any activity determined to have a potential adverse effect on the survival of the threat to an endangered species will be modified or disallowed, perhaps to benefit threatened and endangered species will be coordinated with the Montana Department of Fish, Wildlife and Parks, U.S Fish and Wildlife Service in Yellowstone National Park."

Do you feel that that is an adequate, a sufficient basis for preserving and helping the grizzly bear recover in the Gallatin National Forest?

Mr. **Sargent**. I think there has been very little cooperation or communication between the different organizations.

When the Forest Service wrote about 50 pages of a draft on whether they should put access through us from the point of view of grizzly and other concerns, in the 50 pages, I believe the Yellowstone National Park was mentioned once, when they had to say it in order to give the borders of the area they were talking about, and that doesn't sound like working very closely to me, and if they don't, we are in trouble.

Mr. **Reid**. Can I respond to that?

Mr. **Seiberling**. Mr. Reid.

Mr. **Reid**. Yes; it is a good framework to work under, but I am afraid it doesn't go far enough. I would say that words like "threats" is not a good idea.

They are kind of flag words, but there is a cumulative impact that is occurring on the Gallatin National Forest, and all of these things—the oil and gas leasing, the logging roads that are going far into the critical grizzly bear habitat, the areas like the high density ski resort proposed at Ski Yellowstone—cumulative, are just whittling away that bear's existence and increasing the risk of mortality for the grizzly bear.

Mr. **Seiberling**. Do you feel that despite these statements in fact, there will be a cumulative impact of a whole lot of activities there?

Mr. **Reid**. I feel that that is certainly the case.

Mr. **Seiberling**. Mr. Sargent, why does the Forest Service want to establish access corridors to these lands in the northern Yellowstone Rim?

Mr. **Sargent**. I think about that a lot. I think one reason was they thought they were going to buy them in part from Mr. Forbes, and actually had an opening on it, and when they didn't get it, they decided they would push for something anyway.

I may be a little cynical. I wouldn't even be suprised if they weren't concerned that the part might expand including some of their lands, so they had better get some access going through there, so they will have a better claim to it.

It certainly has been an area that has been used for ranching, for recreation, for hunting, and it is still an exceptionally good habitat, and we can't help but feel that if it ain't broke, don't fix it.

Mr. SEIBERLING. Is there some interest in logging in there?

Mr. SARGENT. When they first started talking about it—and our concern is now probably 5, 6, 7 years—when they first started talking about it, their only interest was logging.

And in the last few years, they have played down the logging and said, "Yes, we probably want to do a little bit here and there, but mainly we have got to get the public into the park."

Well, no, they say into the Forest Service, which is a narrow strip between the private land and the park, and incidently, that park, I know, isn't too happy about it, because they have no way to manage that area, which has been exposed.

Mr. SEIBERLING. All right. Thank you.

I have no further questions.

Mr. Craig.

Mr. CRAIG. Thank you very much, gentlemen, for your testimony.

One question only of you, Mr. Sargent, that relates to access.

I know that we have had some problems in the west in recent years with private rim land that in part blocks off potential access to the Forest Service land, and the reason we have had those problems is because some ranchers have been enticed, if you will, into blocking up their land through hunting reserves or preserves or hunting clubs, and for profit reasons, deny major public access and only paying public access.

It has been a concern of ours in a few parts of Idaho. It has been of concern in other parts. Colorado has had it. Your State has had it, and others have had it, and I wonder if the Forest Service hasn't sought to maintain access in some of these unique rim land areas where you have private land?

Has that been the case in your area at all?

Mr. SARGENT. Well, I don't think so. Of course, as far as leasing the hunting rights, my conservation prevents me from doing that anyway.

Mr. SEIBERLING. But has any of that gone on in your area with private land owners?

Mr. SARGENT. Yes; there are. Several of the ranchers use an outfitter, but as far as access is concerned, most of the people who would want to come through us—and we allow them except in one season—want to go to High Lake, and that is in the park if they go through the next over, they want to go to Sportsman's Lake, and that is in the park—and there are two or three ways to get to those lakes in the park by going through the park. And that makes some sense, since otherwise, who tells them about the regulations and the fishing licenses and tells them whether the catch is filled?

When people ask to go through us, we end up calling the park and finding out whether it is okay for them, but that is not really our job.

We even offered to accept the $2, but that isn't a good idea, either. But every single one of the ranchers involved allows people to go through the property all year except during the hunting season.

We used to allow people to go through during the hunting season. We were warned that it was an old poacher's route, and the last person that we let go through was found arrested 4 days later shooting sheep in the park, and we really didn't think that was something to encourage.

But if you want to hunt, you can. You have to work for it. But that is why, when you get there, the hunting is good, why you can still take a trophy elk, and you can do that without trespassing on private land or the park.

So, we think the situation is pretty good.

Mr. Craig. Good. Thank you. I appreciate your testimony.

Mr. Seiberling. Thank you, gentlemen. I knew we would finish sometime.

I commend you for your patience in sitting through this. It may not have been an exhaustive investigation, but it was quite exhausting.

Thanks very much.

This hearing is now adjourned.

[Whereupon, at 8:10 p.m., the subcommittee was adjourned.]

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APPENDIX

THURSDAY, OCTOBER 24, 1985

Additional Material Submitted for the Hearing Record

STATEMENT OF WILLIAM PENN MOTT, JR., DIRECTOR, NATIONAL PARK SERVICE, DEPARTMENT OF THE INTERIOR, BEFORE THE SUBCOMMITTEES ON NATIONAL PARKS AND RECREATION AND PUBLIC LANDS OF THE HOUSE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS CONCERNING THE YELLOWSTONE ECOSYSTEM.

OCTOBER 24, 1985

Mr. Chairmen and Members of the Committees, it is a pleasure to be here today to discuss the Yellowstone ecosystem.

When the first expedition traveled on horseback through the wildlands of the Montana Territory in 1870, I sometimes wonder what these explorers' reactions were as they rode out of a dense lodgepole pine forest only to see, a few hundred yards away, an open basin marked by rising clouds of vapor and a column of steam and water shooting more than 100 feet into the air - "Old Faithful," the geyser that has come to symbolize Yellowstone National Park. It was probably the same reaction that any first-time visitor to Yellowstone National Park experiences...awe and wonder.

Lt. Gustavus C. Doane, who provided support to these civilian explorers during their journey through the wildlands, reported that "As a country for sightseers, it is without parallel; as a field for scientific research, it promises great results; in the branches of geology, mineralogy, botony, zoology, and ornithology, it is probably the greatest laboratory that nature furnishes on the surface of the globe." For those who have had the privilege of visiting Yellowstone National Park, I believe that you will agree with his account.

Therefore, in retrospect it is not surprising that President Ulysses S. Grant signed a law on March 1, 1872, setting aside this land as our first national park. But, at that time in our Nation's history, our land base seemed endless, and life seemed relatively simple. What is surprising, though, in retrospect is the relatively complete boundary defined by the law establishing Yellowstone National Park. A great number of significant features were included within those boundaries. However, as time passed and our knowledge of the park increased, boundary adjustments were made. With the last boundary change, which was signed into law on October 20, 1932, the park's boundary was solidifed. Since then, we have seen no need to change that boundary, and I see no reason to change it today.

Since 1932, our scientific knowledge has increased exponentially. With that knowledge has come a deeper appreciation that this park and many of its resources do not exist in isolation, but rather are directly related to the resources surrounding the park boundary. These relationships, which have come to be known to the public as "the Yellowstone ecosystem," that we are discussing today.

Generally speaking, the art of "ecosystem management" is in its infancy mainly because one must first ask, "How is that ecosystem defined? By whom? From what perspective?" An example of our most notable attempt to define and, therefore, manage an "ecosystem" on public lands in an integrated fashion is illustrated in the work of the Interagency Grizzly Bear Committee. This interagency effort will be discussed in more detail by the Fish and Wildlife Service.

More importantly, I would point out that this is not the only attempt by the land managing agencies to coordinate their planning and management. There are many formal and informal contacts among land managers to share information and to seek comments. Superintendent Barbee, Yellowstone National Park, has accompanied me here today and can discuss these with you in more detail. To be sure, efforts must be strengthened to address the integrated planning and management of resources of the greater Yellowstone area, an example being the geothermal features since 60 percent of the world's geysers are located within Yellowstone National Park.

In fact, today we are proposing to do just that: strengthen our efforts administratively through the establishment of interagency coordination, cooperation, and integrated land management to:

1. Review the concept of ecosystem planning and management;

2. Define what should be included within this concept; and

3. Develop parameters within which the land managing agencies will operate to achieve the goal of ensuring the integrity of the resources.

I do not believe that you will find us divided on the general goal of ensuring the integrity of various resources that make up the greater Yellowstone area. However, questions are raised about how these land managing agencies can accomplish this job given their differing mandates, and over what area, or land mass, this process should be placed. These are fair questions. Answering these questions is a goal that our professionals on the ground have been discussing, both formally and informally, over the past several years as more scientific evidence is developed and as a greater understanding is achieved.

For the immediate future, I believe that we can trust the professionals who manage these lands as we begin this process. These field professionals, be they from the Forest Service, Fish and Wildlife Service, Bureau of Land Management, or the National Park Service, do not take their jobs lightly. I know that the Park Service professionals, from my first hand experience, take seriously their mandate to "protect and preserve for the benefit and use of present and future generations." I will personally continue to oversee their efforts.

With regard to the incredible resources that make up the greater Yellowstone area, in my mind there is little doubt about how future generations will judge our stewardship. It is not and will not be easy, but I firmly believe that we can and will accomplish our goal through the process I have outlined today. We will continue to keep the Congress informed of our progress.

That concludes my formal testimony, Mr. Chairmen. I would be happy to respond to any questions that you or Members of the Committees may have.

OCT 24 1985

STATEMENT OF ROBERT F. BURFORD, DIRECTOR, BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR, BEFORE THE SUBCOMMITTEE ON PUBLIC LANDS AND THE SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION, COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, UNITED STATES HOUSE OF REPRESENTATIVES, AT A JOINT OVERSIGHT HEARING ON MANAGEMENT ISSUES RELATING TO THE "GREATER YELLOWSTONE ECOSYSTEM."

I appreciate the opportunity to discuss with you today our management programs concerning the "Greater Yellowstone Ecosystem."

We strongly endorse the concept of recognizing all the resources of the entire area. This includes the recreational, wildlife, mineral and other values. We firmly believe that existing statutory authority provides an adequate mechanism to protect the "Greater Yellowstone Ecosystem" and the multiple values of the non-park Federal lands in that area.

As you know, the area referred to as the "Greater Yellowstone Ecosystem" involves three States: Montana, Wyoming and Idaho, and has been defined by some as "the area within the States of Montana, Wyoming and Idaho which contains the Yellowstone and Grand Teton National Parks, Red Rock Lakes National Wildlife Refuge, the National Elk Refuge and portions of the Gallatin, Custer, Shoshone, Bridger-Teton, Caribou, Beaverhead and Targhee National Forests. I will briefly discuss the involvement of the Bureau of Land Management in each State, and then will discuss briefly the care we take to assure that all resource values in the area are given consideration in developing management plans, and the extent of our interagency coordination and cooperation.

Montana

With the exception of the Red Rock Lakes - Centennial Valley Area, there are few parcels of land administered by the Bureau of Land Management (BLM) in Montana within the Greater Yellowstone Area.

Most of the wildlife habitat resources managed by BLM within the Yellowstone region are in the Red Rock Lakes - Centennial Valley Area. In this Area, we have recently acquired through exchange lands that possess significant wildlife resource values. While there exists a potential for conflict with the management of wildlife habitat resources and mineral development, we are certain that our planning and management processes can resolve the issues.

When dealing with threatened and endangered species, BLM takes care to closely coordinate with other affected State and Federal agencies. Our Montana State Office is represented on the Montana Bald Eagle Working Group, the Montana Peregrine Falcon Coordinating Committee, the Interagency Grizzly Bear Committee and the Grizzly Bear Research Committee.

Grizzly bear habitat on BLM lands in Montana within the Greater Yellowstone Area consists of a few scattered parcels and is considered to be insignificant. The U.S. Forest Service is responsible for management of the majority of the grizzly bear habitat north of Yellowstone National Park within the region.

The U.S. Forest Service administers the surface of the greatest portion of the area surrounding Yellowstone National Park in Montana. BLM administers the subsurface mineral estate for these lands. The lands are rated as having low to moderate potential as oil and gas areas and limited potential as geothermal areas.

There are no solid mineral leases on BLM administered lands in Montana within the areas identified as being part of the Greater Yellowstone Area or biosystem. There are, however, numerous mining claims recorded with BLM, but no estimate of numbers can be given without specific boundary identification of what lands are defined as within an "ecosystem."

Wyoming

BLM administers only a small amount of the Federal land in the Greater Yellowstone Area in Wyoming. The National Park Service and the U.S. Forest Service administer most of the Federal lands. Our comments are limited to the BLM administered lands and to mineral leasing on U.S. Forest Service administered lands.

Wildlife habitat is one of the more significant resource values on the BLM administered lands. BLM administers the Whiskey Mountain Bighorn Sheep Area, the East Fork Elk Winter Range, and the only known population of Black-footed Ferrets near Meeteetse. We are not certain whether these areas are considered in the Greater Yellowstone Area. In any event, in managing these areas, we are involved in cooperative management with other Federal agencies and the State.

There are three BLM wilderness study areas (WSA's) that may be within the Wyoming portion of the Greater Yellowstone Area. These three areas are Owl Creek, Whiskey Mountain, and the Dubois Badlands. Recreation use on the BLM administered lands in Wyoming within the Greater Yellowstone Area is extensive. Hunting, fishing, and to a lesser extent, hiking, backpacking and off-road vehicle use are the major recreation activities. We have no specific visitor use figures on the limited amount of BLM land within this area. We have several special recreation permits issued in the Dubois area for guide and outfitter operations.

With regard to locatable minerals, Wyoming Geological Survey publications indicate that Northwestern Wyoming is mineralized. Numerous areas containing gold, copper, lead, silver, molybdenum, zinc, asbestos and gypsum are scattered over the area.

We estimate that there are presently 5,000 to 6,000 mining claims in the area of Wyoming which may be considered the Greater Yellowstone Area.

We have issued a few Free Use Permits for highway purposes in the Dubois area for salable minerals. There are no solid leasable minerals.

With regard to fluid leasable minerals in Wyoming, the area southwest of the Yellowstone area is dominated by the Idaho-Wyoming overthrust belt. The overthrust belt has a high oil and gas resource potential but is largely untested. There are estimated to be 2,000 to 3,000 oil and gas leases in the area. These leases contain adequate provisions for protection of the environment.

There are no geothermal leases in effect in Wyoming. Geothermal springs are scattered throughout the southern portion of the area from Jackson Hole to Dubois. No Known Geothermal Resource Areas (KGRA) lie in the Wyoming portion of the area and geothermal potential is classified as low.

Idaho

BLM administered lands in Idaho that may be within the Greater Yellowstone Area are limited to portions of one resource area operating out of our Idaho Falls District Office. In addition to livestock and timber values, the BLM areas have wildlife and recreation values.

One area is a crucial big game winter range that is especially important to elk, many of which migrate from the Yellowstone Park area. We maintain close cooperation in both management and research with the Idaho Department of Fish and Game.

The South Fork of the Snake River is a major bald eagle nesting and roosting area. We have close cooperation with the Idaho Department of Fish and Game, U.S. Forest Service, U.S. Fish and Wildlife Service, and several local agencies in managing this area. This stretch of river is a major float trip recreation area and it is possible that in the future conflicts may occur between eagles and recreation users. Other potential conflicts include housing developments along the river, firewood cutting, and gravel removal.

Other threatened and endangered species, such as grizzly bears and wolves, are found in the Greater Yellowstone Area but rarely occur on BLM administered lands. Whooping cranes from the Gray Lake Refuge just south of the Greater Yellowstone Area may occasionally travel into the area. Efforts to reestablish the peregrine falcon are being undertaken at the Red Rock Lakes Refuge and near Palisades Reservoir.

The U.S. Geological Survey established the Island Park Known Geothermal Resource Area, just west of Yellowstone Park in 1975 because of the overlapping geothermal lease applications. The Secretary of the Interior has the authority to prohibit drilling or leasing if it would harm Yellowstone. As a matter of fact, there are no plans to even consider leasing these geothermal resources at this time. The U.S. Geological Survey has also identified the overthrust belt, located primarily on lands administered by the U.S. Forest Service, as having potential for oil and gas.

BLM in Idaho has worked successfully with State and other Federal agencies on - single purpose projects such as the Sands Habitat Management Plan and Bald Eagles.

To give you some idea of the care BLM exercises in managing the resources in the areas it administers in the Greater Yellowstone Area, prior to oil and gas or geothermal leasing on any of these lands, the environmental impacts are analyzed in environmental analyses and forest planning documents prepared by the Forest Service. These documents serve as the basis for determining whether leasing should be allowed and, if it is allowed, what restrictions will be required in future leases.

These documents are developed with involvement of the interested public and agencies with special expertise or administrative responsibilities in the area, including the U.S. Geological Survey and the National Park Service. After completion of this process BLM issues any leases that are to be allowed, with any special requirements developed from these documents. Leases in nonproducing areas normally are for a term of 10 years and give the right, subject to the special restrictions, to explore for and develop oil and gas or geothermal resources.

When a leaseholder decides to undertake any "on the ground" activity under the lease, such as drilling, an application for permit to drill (APD) must be submitted (geothermal plans of operation and drilling permits are the equivalent instruments for geothermal exploration and development). At this point another level of environmental analysis is conducted. All operational proposals are evaluated in accordance with the National Environmental Policy Act of 1969 (NEPA) by BLM and the U.S. Forest Service. This would result in an environmental assessment or, where necessary, an Environmental Impact Statement.

The APD review considers a number of technical, safety and environmental concerns, including:

1. Assurance that all subsurface resources are protected, including oil and gas zones, geothermal zones, other minerals, potable aquifers, etc.;

2. Assurance that the technical proposal meets all industry and government standards;

3. Assurance that all safety measures reasonably needed are complied with;

4. Assurance that proper reclamation will occur, including a review to assure that the operation is properly bonded; and

5. Required clearance for Threatened and Endangered Species (including a major concern for this area - the grizzly bear) and for Cultural Resources.

As a result of these analyses, done with public and expert participation, site-specific mitigating measures are developed and required as a condition of permit approval.

Any deficiencies found must be upgraded by the lessee or the APD will be denied.

Once approved, the permit is monitored for compliance with the terms of the permit by BLM and the U.S. Forest Service. Violations of laws or regulations or deviations from the approved plan can result in fines ranging from $100 to $5,000 per day, shutdowns of the operation, or lease cancellation.

Field development proposals are again analyzed, in accordance with NEPA, following any initial discovery. In the areas we are discussing, this would probably involve an Environmental Impact Statement. Thus, permitting of an exploratory well will not allow field development without further environmental analysis.

Proper abandonment of wells, again including the protection of all subsurface and surface resources, is accomplished pursuant to the approved operational plan.

BLM exercises great care when considering all proposals that may affect the quality of the environment within the Greater Yellowstone Area. All land use plans, environmental assessments and environmental impact statements produced by BLM are made available for comment by all agencies, interested individuals and groups in the area. In turn, other agency land use plans and environmental documents are made available to BLM for our review and comment. This helps to avoid major conflicts in program direction on adjacent jurisdictions. Another important element in the protection of the ecosystem is the memorandums of understanding that BLM has with other agencies involved in its protection, all designed to further that purpose.

We firmly believe that existing statutory authority provides an adequate mechanism to protect the "Greater Yellowstone Ecosystem" and the multiple values of the non-park Federal lands in that area.

This completes my statement. I will be pleased to respond to any questions you may have.

STATEMENT BY RONALD E. LAMBERTSON, ACTING DEPUTY DIRECTOR, U.S. FISH AND WILDLIFE SERVICE, CONCERNING COOPERATIVE OPERATIONS AT THE RED ROCK LAKES AND NATIONAL ELK REFUGES WITHIN THE GREATER YELLOWSTONE ECOSYSTEM PRESENTED TO THE JOINT OVERSIGHT HEARING ON MANAGEMENT ISSUES RELATED TO THE GREATER YELLOWSTONE ECOSYSTEM.

October 24, 1985

I would like to address the interagency involvement and activities on grizzly bear recovery and management in the Yellowstone Ecosystem. Due to the bear's wide-ranging nature and the factors influencing its distribution, a multitude of agencies and jurisdictions are involved in grizzly bear management; and a coordinated recovery effort involving State and Federal agencies has been essential to ensure the best utilization of resources and avoid any duplication of effort.

In April 1983, a Memorandum of Agreement (MOA) was signed between the Department of Agriculture and the Department of the Interior, establishing an Interagency Grizzly Bear Committee (IGBC). The MOA was expanded and revised in April 1984 and was signed by the Governors of the States of Wyoming, Montana, Idaho, and Washington. A copy of the agreement is attached. The IGBC was formed to further interagency coordination and cooperative essential to recovery of the bear. It serves as the primary coordinating mechanism for research, management, and funding needs for the grizzly bear in the lower 48 States. Committee members include Regional Directors of the Fish and Wildlife Service and National Park Service; three Forest Service Regional Foresters; and representatives from the Bureau of Land Management and the States of Idaho, Montana, Washington, and Wyoming. The members are top level managers who can ensure that necessary actions are implemented. Four subcommittee were also established under the IGBC to implement approved actions and to propose and direct needed research. The four subcommittee are: the Yellowstone Ecosystem, Northern Continental Divide Ecosystem, Northwest Ecosystem, and Research. The Yellowstone Ecosystem Subcommittee is made up of representatives of the National Park Service, National Forest Service, State representatives from Wyoming, Montana, and Idaho, and Fish and Wildlife Service representatives. The IGBC and the subcommittees meet at least twice a year (more often if important issues arise which need combined interagency attention).

Since establishment of the IGBC and the resulting coordinated research effort, there has been a definite shift in grizzly bear research away from site-specific, general bear biology studies to research focusing on the effects of certain human activities on bear behavior and habitat use. Such studies will provide managers with information enabling them to better manage the bear and its habitat.

Recent interagency management efforts have also concentrated on minimizing human/bear conflicts and preserving habitat areas critical to bears. Concerted efforts have been made to clean up the garbage and storage problems existing not only in the backcountry but in towns such as West Yellowstone and Gardiner, Montana. Conservation groups, Federal and State agencies, and local governments are cooperating to clean up problem areas and purchase bear-proof dumpsters. Several National Forests have also installed large metal lockers and 12-foot high meat poles at backcountry campsites to provide bear-proof storage for food, game meat, etc., and thus reduce the attractants for bears, and hopefully bear/human conflicts as well.

A coordinated interagency law enforcement effort initiated in the Yellowstone Ecosystem in 1983 continues to show positive results. This effort is aimed at decreasing potential bear/human conflicts and the illegal killing of grizzly bears. During 1984 alone, over 65 individual agents from the three State and three Federal agencies involved patrolled the backcountry. Total bear mortalities were significantly reduced in the Yellowstone Ecosystem in 1983 and 1984. We believe that the law enforcement effort has contributed to this reduction. This effort will continue in Yellowstone in 1985 with plans to expand into the Northern Continental Divide Ecosystem in the future.

In summary, the grizzly bear management issues affect a broad range of land uses, public agencies, and the public. Over the past several years, a coordinated recovery effort has begun to better manage the grizzly and to learn how resources uses and the grizzly bear can best coexist.

The Fish and Wildlife Service administers two National Wildlife Refuges within the Greater Yellowstone area-Red Rock Lakes, located to the west in the Centennial Valley of Montana and National Elk, to the south in the Jackson Hole area of Wyoming.

The 40,300-acre Red Rock Lakes Refuge was established in 1935 to protect habitat for the then endangered trumpeter swan. Trumpeter swans are no longer endangered, but the population remains small and of great concern to the Service, the Trumpeter Swan Society, numerous other private organizations, and a variety of Federal and State agencies as well as a major portion of the general public. While Red Rock Lakes is a rather isolated station, its cannot be operated in a vacuum; and therefore, numerous cooperative management efforts are taking place. Refuge personnel conduct two Greater Yellowstone area swan surveys annually with aircraft. A Tri-State (Montana, Wyoming, and Idaho) survey is conducted in September, and another mid-winter survey is completed in February. The State game and fish agencies and other Federal agencies routinely provide support for these surveys, but refuge personnel have lead responsibility. These operations are supported by the Trumpeter Swan Technical Committee of the Pacific Flyway Council. (The Flyway Councils consist of technical experts from the State wildlife management agencies who advice the Service on migratory bird issues. The nation is divided into 4 Flyways; the Pacific Council consists of representatives from Arizona, California, Idaho, Nevada, Oregon, Washington, Utah, Colorado, Montana, New Mexico and Wyoming.) The surveys cover four national forests, two national parks, two Bureau of Land Management districts, one State park and two National Wildlife Refuges.

Red Rock Lakes National Wildlife Refuge personnel also provide trumpeter swan technical assistance to the Gallatin and Beaverhead National Forests, Yellowstone National Park, Harriman State Park in Idaho and private landowners. A nest register for swans is maintained at the refuge based on agreements with the Pacific Flyway Council and the Trumpeter Swan Technical Committee. One swan research study is currently being conducted by Montana State University, Missouri, with funding provided by Fish and Wildlife Service, Idaho, Wyoming, and Montana Game and Fish Departments.

For the past several years, the refuge has been used as a "hacking" (a traditional falconry procedure involving keeping fledgling raptors in a state of partial liberty by feeding and caring for them until they learn to fly and hunt on their own) site for peregrine falcons by the Peregrine Fund. An interagency agreement exists for this operation that includes the Fish, Wildlife Service, BLM, Forest Service, Montana Department of Fish and Wildlife and Parks, and the Peregrine Fund, and a copy is attached to my statement. It would appear that this operation has been successful since an nest has become established in the Centennial Valley, which is the only one in Montana.

The refuge manager is also a member of the Southwest Travel Plan group which evaluates public use regulations on public lands. Membership in this group consists of representation from the Forest Service, BLM, Montana Department of Fish, Wildlife and Parks, and the FWS. This operation has been helpful in developing compatible regulations on all public lands.

A variety of efforts are regularly conducted to keep fire suppression actions current. A cooperative agreement for the Lima Fire District of BLM is in effect. The refuge is also a member of the Southwest Montana Fire Council which is a group of Government agencies banded together to coordinate training and general emergency preparedness.

Refuge staff work closely with Soil Conservation Service, wilderness groups, private conservation groups, etc., in obtaining input for management operations. While this station is remote and had only minor contact with the public (7,000 visits per year), there is a considerable amount of ongoing coordination with public and private organizations.

The 24,289-acre National Elk Refuge was established by Congress on August 10, 1912, to acquire, preserve and manage lands for the wintering elk of Jackson Hole. The refuge lies within Teton County and is bounded on the north by Grand Teton National Park, on the east by the Bridger-Teton National Forest and on the south and west by the town of Jackson and mixed private and Bureau of Land Management lands, respectively.

Elk wintering on the National Elk Refuge spend their summers in Grand Teton National Park, Yellowstone National Park, or Bridger-Teton National Forest. Migration to the refuge is usually complete by mid-November. Elk begin to leave the refuge in April, and are generally gone by mid-May. No more than 100 or so elk usually remain on the refuge during the summer.

A major management effort of the refuge is the winter supplemental feeding of elk which is accomplished under the direction of a cooperative agreement between the Fish and Wildlife Service and the Wyoming Game and Fish Department dated August 1974, a copy of which is attached. Under this agreement, the Refuge elk herd is not to exceed 7,500 animals. Cost for the winter supplemental feed is shared equally by the FWS and Wyoming Game and Fish Department. The local Boy Scouts of America troop annually collects dropped antlers on the refuge, which are sold at public auction. The Scouts, in turn, annually donate approximately $35,000, toward the purchase of elk feed.

Because of the importance of the elk in the Jackson Hole area and because of the legal responsibilities for study and management of these animals, a Memorandum of Understanding covering the "Jackson Hole Cooperative Elk Studies" group has been in existence since 1959; a copy of the agreement is attached. Membership consists of the Wyoming Game and Fish Department, U.S. Forest Service, National Park Service, and Fish and Wildlife Service. Meetings are regularly held to discuss the management needs of the animals, and this is generally done through two committees; an Advisory Council composed of agency administrators and a Technical Committee composed of delegated technicians from the participating agencies.

An agreement had recently been reached with the Bureau of Reclamation for the placement of a seismograph station to monitor earthquakes on the Elk Refuge. Additionally, a number of mutually beneficial agreements are in existence between the FWS and the National Park Service, and cover a variety of areas and endeavors. These include:

1. The sharing of equipment such as trucks, crawler tractor, snowplows, etc., on either an exchange or cost reimbursement basis.

2. The utilization of Parks National Crime Information Center terminal and State of Wyoming's teletype system on law enforcement matters. The Fish and Wildlife Service also utilizes the State of Wyoming radio dispatch service, firing range, firearms instructors, training opportunities, and seasonal law enforcement people when needed.

3. Utilization of the National Park Service sign shop for construction and major repairs to refuge signs.

4. Through a reciprocal written agreement with the Grand Teton Natural

History Association, the Service contrasts for a winter sleigh ride activity which serves as a major interpretive program for 25,000 visitors annually. A copy of the agreement is appended to my statement. Under this agreement, periodicals and other interpretive publications are sold.

5. Under a Memorandum of Understanding, the Park provides crew members and equipment to assist with wildfire and control prescription burns on the refuge. Service personnel are also available for Park usage.

Operation by Federal and even State agencies in the Jackson Hole area of Wyoming are generally very well coordinated. It is the general rule that agency personnel almost daily share their management decisions with "neighbors," and constantly ask for input for developement projects. Each year, roughly 2,000,000 people visit the Jackson Hole area. This volume of public use requires and recieves the full cooperation of all State and Federal agencies.

Copies of other interagency agreements, membership lists for the cited committees, and the Interagency Grizzly Management Guidelines are also attached to the statement.

This concludes my prepared statement. I would be pleased to answer any questions you may have.

IN REPLY REFER TO:
1780 (622)

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

July 9, 1984

Instruction Memorandum No. 84-585
Expires 9/30/85

To: All Field Officials

From: Director

Subject: Interagency Agreement Between the Bureau of Land Management and the Forest Service for Mineral Leasing

A copy of the subject agreement is enclosed for your information and prompt implementation (Enclosure 1). The expressed purpose of the agreement is to ensure cooperative, timely, and efficient action by the Bureau of Land Management and the Forest Service with respect to mineral leasing. Note that a single environmental analysis is to be completed and is to serve as the environmental basis for all recommendations and/or decisions made by both agencies. Therefore, joint scoping of proposed actions to identify issues, concerns, and responsibilities is essential, and participation rather than review is to be emphasized.

The agreement is written broadly to provide general guidelines for mineral leasing. Supplemental agreements are encouraged to implement more specific local procedures. For information purposes, such agreements are to be forwarded to the Director (500).

Comments or questions concerning the agreement may be directed to Karl Duscher or Greg Shoop, FTS 653-2187.

James M Parker
James M. Parker
Associate Director

1 Enclosure
Encl. 1 - Interagency Agreement Between the Bureau of Land Management and the Forest Service for Mineral Leasing (5 pp)

INTERAGENCY AGREEMENT
BETWEEN
THE BUREAU OF LAND MANAGEMENT
AND
THE FOREST SERVICE
FOR
MINERAL LEASING

The Bureau of Land Management (BLM), Department of the Interior, and the Forest Service (FS), Department of Agriculture, hereby agree that the policy and procedures set forth in this Interagency Agreement (IA) shall be followed with respect to the processing of authorizations, such as licenses, permits, and leases, that grant rights to federally owned minerals in the National Forest System (NFS) and in adjoining lands with Federal minerals (split estate lands). Such authorizations are collectively referred to in this IA as leases. This agreement does not include permits issued by the FS to do preliminary mineral-related investigations or surveys.

I. AUTHORITIES

The BLM manages the Federal leasable mineral estate under authority of the Mineral Leasing Act of 1920 (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands (30 U.S.C. 351-359), the Geothermal Steam Act of 1970 (30 U.S.C. 1001 et seq), Section 402 of Reorganization Plan No. 3 of 1946 (5 U.S.C. Appendix), the Federal Coal Leasing Amendments Act of 1976 (90 Stat. 1083), and other Acts.

The FS manages the NFS for multiple use and sustained yield of products and services and is authorized to make rules and regulations to govern surface use and occupancy under the authority of the Organic Administration Act of 1897 (16 U.S.C 473-475, 477-482, 551), the Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528 (note), 528-531), and the National Forest Management Act of 1976 (90 Stat. 2949). Under certain statutes the FS has consent authority for leasing of the NFS. Also, in accordance with 43 CFR 3101.7 and through long standing agreement between the Departments, the FS provides recommendations where consent authority does not exist.

II. PURPOSE

This IA establishes the policy and procedures by which leasing proposals which involve the NFS and adjoining private lands with Federal minerals are to be processed by the BLM and the FS. This policy and these procedures are adopted to ensure cooperative, timely, and efficient action by the BLM and the FS with respect to such leasing, consistent with the statutory and regulatory responsibilities of each agency.

III. RESPONSIBILITIES

A. NEPA Compliance and Coordination. Issuance of leases by the BLM is a Federal action which requires an environmental analysis to be made in conformance with the National Environmental Policy Act of 1969 (NEPA), its implementing regulations (40 CFR 1500-1508), and agency direction. In order to comply with these requirements in an efficient and effective manner, both agencies will participate jointly in scoping each proposed action. A single environmental analysis and, if appropriate, a single document is to be completed such that it will be an adequate environmental basis for all recommendations and/or decisions to be made by either the FS or the BLM.

For leasing proposals which primarily involve the NFS or adjoining private lands with Federal minerals and which primarily involve NFS issues, the FS will have the lead for environmental analysis and, when necessary, documentation in an environmental assessment or environmental impact statement. For leasing proposals which involve primarily non-NFS lands or issues, the participation of each agency in environmental analysis and documentation will be determined during scoping. In all cases, FS expertise will be recognized for that portion of any analysis or document concerning protection and utilization of the NFS.

B. Stipulation Development and Use. The BLM and the FS will coordinate the development of stipulations in conjunction with NEPA compliance at the local level to ensure appropriate wording and to ensure that adeqate justification for their use exists in the record. The BLM and the FS will coordinate agency-wide stipulation use policy at the Washington level.

C. Agency Decisions. Leasing decisions are to be coordinated by the BLM and the FS so that requirements identified through the environmental analysis and, if appropriate, the environmental document are considered in FS recommendations (including those pertaining to adjoining private lands with Federal minerals) and/or consent decisions and in subsequent BLM leasing decisions. Coordination with respect to FS recommendations and/or decisions is to be such that FS is aware of final action to be taken by BLM.

1. Recommendations. When the FS role in the leasing decision is limited to providing the BLM with advisory, nonbinding recommendations, the FS will forward its recommendations to BLM as to the leasing of the NFS and adjoining private lands with Federal minerals.

2. Consent. When the decision requires consent of the FS for the leasing of the NFS, the FS shall notify affected parties of its decision. After expiration of the FS appeal period, the FS shall forward its decision to BLM. When the FS provides recommendations for adjoining private lands with Federal minerals or recommendations involving non-NFS lands or authorities within its decision, they are to be so identified.

D. Appeal Coordination. To the extent that potential leasing of the NFS and of adjoining private lands with Federal minerals involves only FS recommendations, FS actions are not subject to appeal to the FS. However, to the extent that such leasing of the NFS requires FS consent, FS decisions are subject to appeal to the FS under 36 CFR 211.18. If a decision is appealed, the FS will promptly notify the BLM.

All BLM decisions, subsequent to either FS recommendations or consent decisions, are then subject to protest to BLM and/or appeal under 43 CFR 4. The BLM will promptly notify the FS if a BLM decision affecting a lease proposal of the NFS is protested or appealed.

E. General Program Coordination.

1. The BLM will review proposals for leases prior to forwarding them to the FS to ensure compliance with applicable regulations. The BLM will forward acceptable proposals to the FS within 15 days of receipt with a request for a FS recommendation and/or consent decision and, if acquired minerals are proposed for leasing, a request for a title report.

2. Within 30 days of FS receipt of a leasing proposal, the BLM and the FS will, if necessary, scope the proposal.

3. The FS will forward its recommendation and/or consent decision within 60 days of the initial receipt by the FS of the leasing proposal, or will provide the BLM with a date to expect a response giving the reason for such delay.

4. The BLM State Director and the FS Regional Forester will attempt to resolve differences concerning FS leasing recommendations or differences involving specific leasing procedures. Differences which cannot be resolved will be forwarded promptly to the BLM Director and the FS Chief for resolution.

5. The BLM will close a case by either issuing a lease or rejecting an offer within 60 days of receipt of FS recommendations or consent decisions.

6. The BLM will provide the FS information relative to changes in the status of offers, licenses, permits, and leases within 10 days of the change.

7. The BLM and the FS will incorporate the policies and procedures set forth in this agreement into their respective manual systems. The BLM and the FS will coordinate and share at the local and national level manual releases, policy memoranda, and directives affecting the respective leasable mineral programs.

8. The BLM and the FS will coordinate the preparation of budget proposals for leasable minerals at the national level to ensure that data and information are consistent and that major projects, such as coal leasing plans, are appropriately considered in the budgets of both agencies. The BLM and the FS will coordinate work plans at the State Director/Regional Forester level and, with respect to NEPA compliance for leasing of split estate lands, will notify respective Washington Offices when substantial costs will be incurred.

IV. SUPPLEMENTAL AGREEMENTS

The BLM State Directors and the FS Regional Foresters are encouraged to enter into supplemental agreements consistent with this IA in order to implement local procedures which will contribute to the cooperative, timely, and orderly processing of mineral leasing proposals. A copy of supplemental agreements will be forwarded to the BLM Director and the FS Chief for information.

V. EFFECT ON PRIOR AGREEMENTS

This IA supersedes the following interagency agreements, in whole or in part as indicated, as they relate to the processing of mineral leasing proposals and, to the extent inconsistent, any other agreements between the BLM and the FS.

1. Sections III, IV, and V of the Cooperative Agreement Between Forest Service (USDA) and the Geological Survey (USDI) for Operations Within Solid Mineral Permits and Leases on National Forest System Lands, dated November 1980, are superseded.

2. The Interim Memorandum of Understanding Between the Bureau of Land Management and the Forest Service, dated December 1980, is superseded in its entirety.

3. Sections I.A., I.B., III.A., and III.B., of the Memorandum of Understanding for the Geothermal Program between the U.S. Geological Survey - Bureau of Land Management - USDA, Forest Service, dated December 1981, are superseded.

VI. AGREEMENT REVIEW

Within 1 month prior to the anniversary date of this IA, the FS Regional Foresters and the BLM State Directors shall apprise their respective Washington Offices of suggested modifications, if any, to this agreement which would contribute to the cooperatively, timely, and orderly processing of mineral leasing proposals. These suggestions will be reviewed by the BLM Director and the FS Chief to determine if the IA should be amended.

F. Dale Robertson — 6/19/84
For: Chief, Forest Service — Date

James W Parker — 6/19/84
For: Director, Bureau of Land Management — Date

MEMORANDUM OF UNDERSTANDING
Between the
BUREAU OF LAND MANAGEMENT AND FISH AND WILDLIFE SERVICE

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MEMORANDUM OF UNDERSTANDING
Between the
BUREAU OF LAND MANAGEMENT and FISH AND WILDLIFE SERVICE

I. PURPOSE

The purpose of this agreement is to promote harmonious and effective cooperative relationships between the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) in resource management activities in a manner that recognizes existing cooperative relationships with the States.

II. AUTHORITY

This agreement is made under authority of the Economy Act of June 20, 1932 (31 U.S.C. 686, 6866).

III. RESPONSIBILITIES

The key to achieving the purpose of this agreement is clear definition of BLM and FWS roles and responsibilities within respective statutory authorities. Broad responsibilities are defined below. Specific relationships are set forth in subsequent sections of this agreement. Additional procedures relating to OCS and Geothermal matters are set forth in Secretarial Orders 2974 (Revised) of August 8, 1978, and 2962, respectively.

A. The BLM has the statutory responsibility for cadastral survey, inventory, planning, and multiple-use management of the public lands and public land resources, including fish and wildlife. BLM is also required to assure that fish and wildlife resources are effectively considered in all stages of its land management programs and activities. In connection with this responsibility, BLM must have the capability to efficiently inventory, manage, and protect fish and wildlife habitat.

B. The FWS has principal statutory responsibility and authority for migratory birds, threatened and endangered (T/E) species, certain marine mammals, international resources within the continental United States, and all fish and wildlife on lands under Service control and as described in the Fish and Wildlife Act of 1956 [16 U.S.C 742(a) - 754].

C. FWS and BLM have general responsibilities to conduct research and to compile information on the status of fish, wildlife, and plant resources and those factors affecting them in their respective areas of responsibility. These general FWS assessments for wildlife and vegetative conditions and trends may at times extend to areas within the public lands under BLM administration in response to statutory, Presidential, or Secretarial direction.

D. Both Agencies have fish and wildlife advocacy roles within their statutory authorities or other assigned functions.

IV. COORDINATION

A. Field Coordination. Frequent informal consultation on matters of mutual concern is to be encouraged at all levels. Where disagreements arise, they should be expressed through the levels of authority of the two Agencies, beginning at the lowest appropriate field level.

1. The BLM State and OCS Offices and the FWS Area Offices or their delegated offices will be the primary offices through which field coordination will take place. Each is responsible for ensuring that appropriate offices of its organization are involved whenever appropriate.

2. On matters of mutual interest, the FWS Area Manager or the BLM State Director or the OCS Office Manager will determine which of their respective offices should be the focal point for coordination, including referral to other field organizational units (i.e., BLM Denver Service Center (DSC), FWS Research Centers, Area Offices, and National Teams). The Directors or Leaders of these field units will apprise FWS Area Managers and BLM State Directors and/or OCS Office Managers of planned or ongoing studies, projects, and activities.

B. Washington Office (WO) Coordination Committee. Close coordination is also essential at the WO level. This agreement reaffirms the need to continue the BLM-FWS Interagency Committee for Program Coordination with the following responsibilities:

1. To coordinate the full range of related programs between the two Agencies.

2. To arrange for cooperation, support, and standards in the operational conduct of programs relating to wildlife.

3. To provide for exchange of data, information, findings, and services of mutual concern.

4. To coordinate budget and program execution activities.

The Committee will have the authority to make decisions within its areas of responsibility where the cochairpersons of both Agencies agree.

The Committee will have the authority to establish working groups on specific proposals or problem areas, as required.

The Committee will be jointly chaired by the Associate Director, BLM, and the Deputy Director, FWS. The Committee will be made up preferably with officials at the policy level concerned with the activities involved. It will meet at least once every two months at the call of the cochairpersons.

C. Meetings. There shall be, as a minimum, annual coordination meetings between State and OCS Offices and appropriate FWS Regional and Area Offices, and such other offices as deemed appropriate, timed to coincide with the budget cycle and to discuss programs and plans relative to items of concern to both Agencies for the coming year. WO level meetings shall be held by the BLM/FWS Coordinating Committee.

D. Written Communication. When either Agency solicits, from the other, advice/recommendations on subjects related to this agreement, 30 days, unless specified otherwise, will be afforded for reply. If no response is received within the specified time period, the requesting Agency will assume that the other either concurs or has no comments to offer.

E. Supplemental Agreements. BLM and FWS field offices or other appropriate organizational units may enter into supplemental agreements where needed to specify interrelationships in detail or for specific project-type activities. Such agreements must be within the policy parameters of this agreement and will stress coordination at the lowest appropriate field units.

F. General Assistance. FWS will assist BLM in a manner consistent with this memorandum of understanding (MOU), through cooperative procedures mutually agreed to by BLM State Directors or OCS Office Managers and FWS Area Managers, or as appropriate, Directors or Leaders of other BLM or FWS field units. Examples include participation in certain field projects, providing specialized expertise, developing data collection and interpretation methods, assessing major impacts on wildlife, recommending measures for preventing or mitigating damage to important habitats, and conducting research and sharing research findings to support identified BLM needs.

G. Conflicts. Conflicts shall be resolved in accordance with procedures set forth in section XI of this agreement. Each Agency will strive to support the other in the public arena, to the maximum extent possible.

V. GENERAL PRINCIPLES AND PROCEDURES

A. Multiple-Use Planning

Principles: The cooperative relationship between the two Agencies is built upon the concept that field level input and information exchange, as early as feasible during the land planning process, will contribute to the achievement of basic objectives of both Agencies.

Procedures:

1. BLM State Directors and OCS Office Managers and FWS Area Managers will develop procedures, consistent with this MOU and the five-way interagency agreement relating to "Classification and Inventories of Natural Resources," to provide for regular exchange of information and advice as early as feasible in the planning process.

2. Both Agencies will provide comment on the land-use planning documents of the other within their area of expertise by participating in a consultative manner to minimize conflicts and disagreements. FWS will recognize BLM's responsibility to balance wildlife interests with other concerns in multiple-purpose management.

3. Both Agencies will consider all comments of the other and incorporate those deemed appropriate into decisionmaking.

B. Inventory, Collection, and Analysis of Resource Data

Principles: BLM is responsible for assuring the collection, inventory, and subsequent analysis of fish, wildlife, vegetative, and other resource related data on the public lands. FWS has responsibilities for collection and analysis of data to meet its requirements relative to endangered species, migratory birds and other species, and animal damage control (ADC). FWS is also concerned with the general adequacy of data and analysis for management and protection of wildlife, wildlife habitat, and T/E plant species on a national and regional basis.

Procedures:

1. Both Agencies will coordinate inventory system development and applicable data-gathering activities to foster a common and compatible resource data base, to share information, and to minimize conflicts and disagreements concerning adequacy of wildlife data. Joint efforts in this regard will be guided by the Interagency Agreement Relative to Classification and Inventory of Natural Resources, effective June 6, 1978. Both Agencies will work in partnership to ensure that needed data are obtained in a cost effective and expedient manner, including coordinating to use compatible inventory techniques and developing standards and methods to facilitate data exchange.

2. Each Agency will seek participation of the other in the actual conduct of data collection activities to meet their requirements. FWS and BLM will provide mutual support in terms of cooperative development of new methodology and inventory techniques that will facilitate data collection and mutual management decisions.

3. FWS will conduct inventories and collect data necessary for Critical Habitat determinations on private surface under which Federal minerals are located. This data will be provided to BLM when requested. All pertinent information on public lands will be made available to the FWS upon request.

4. BLM's land-use planning system contains an inventory, data, and information collection step. The regulations (43 CFR, Part 1600) which guide the BLM planning process identify specific opportunities for the FWS to participate in the preparation of resource management plans (RMPs).

RMP Step	BLM Responsibility	FWS Input(s)
a. Preplanning Analysis and Issue Identification	Determine wildlife resource data needs; develop planning/inventory schedule for wildlife resources; estimate financial requirements	Help identify general wildlife situations; recommend data elements needed to address wildlife issues when requested by BLM
b. Management Situation Analysis (MSA)	Identification of existing wildlife resource conditions and potentials on planning area basis	Help identify known significant wildlife habitats (existing and potential); provide other assistance, technical support, and advice upon request by BLM

C. Cooperation with State Fish and Wildlife Agencies

Principles: Both Agencies share the concern that State fish and wildlife resource agencies be routinely consulted to strengthen coordination and cooperative relationships. Every effort will be made to prevent duplicative requests or contacts for information and data assistance with these State agencies.

Procedures:

1. BLM State Directors and OCS Office Managers and FWS Area Managers will keep each other apprised of actions planned or taken with State wildlife agencies on wildlife matters of mutual concern.

2. Whenever resource related research actions and nonoperational studies are proposed with State wildlife agencies by field units within BLM and FWS that are not administered by the FWS Area Manager or BLM State Director or OCS Office Manager, it shall be the responsibility of the Director or Leader of that field unit to keep both the Area Managers and State Directors informed.

3. BLM will ensure State wildlife agency involvement in its programs. Officials of both Agencies will also keep each other informed of their respective resource related activities on lands under their jurisdiction.

D. Environmental Analysis

Principles: The National Environmental Policy Act requires agencies taking major Federal actions significantly affecting the quality of the human environment to prepare environmental impact statements (EIS) on those actions. The preparation of environmental assessments (EA) and EISs must be carried out in consultation with all appropriate agencies and organizations.

Procedures:

1. Each Agency will keep the other apprised of current and projected EIS schedules via the regularly scheduled meetings of the FWS/BLM Coordinating Committee and by other means, as appropriate.

2. Each Agency will request from the other data and other inputs into the applicable EISs and EAs at the earliest possible date. Where one Agency has special expertise or unique talent needed by the other, such will be made available to the EIS or EA team under terms and conditions mutually agreeable to the concerned FWS Area Manager and BLM State Director or OCS Office Manager. This may include detail of personnel to assist in EIS or EA preparation.

3. FWS and BLM budget requests for EISs, EAs, and associated work will be coordinated to reflect their respective responsibilities in the most cost-effective approach and to foster clear communications between the two Agencies. Where budgets are being formulated in advance for specific efforts, normally the budget of the Agency which has lead for such EIS or EA preparation shall be the vehicle for appropriate fund and manpower requests. Coordination at the field level will be in accordance with procedures agreed to by FWS Area Managers and BLM State Directors and OCS Office Managers.

4. Each Agency will provide to the other review copies of draft EISs at the earliest possible time for official review and comment within specified time frames.

E. Research

Principles: Resource related research efforts of both Agencies will be coordinated in the best interest of sound resource management and for maximum cost effectiveness.

Procedures

1. Each Agency will be given an opportunity to identify and review the other's research proposals relating directly to its lands or management responsibilities in order to avoid duplication, help ensure management application when appropriate, and determine if similar research is being conducted by other sources.

2. Pertinent research results, including significant interim findings, of either Agency will be made available to the other on a timely basis. BLM State, District, and OCS offices are to be included on

applicable FWS mailing lists, including cooperative fishery and/or wildlife units, for research reports and summaries on matters that relate or that are applicable to wildlife, mineral, and vegetative resource management on the public lands. FWS Regional and Area offices are also to be included on the mailing list for BLM Technical Notes.

3. FWS and BLM may conduct cooperative research either on public lands or elsewhere. FWS shall coordinate, in advance, with the appropriate BLM State Director, plans for research or special studies on public lands.

4. Annual meetings shall be held at the field and WO levels to coordinate research surveys, investigations, and studies being conducted which are of mutual program interest to both Agencies. This also includes such work being conducted by the FWS's Western Energy Land Use Team and The Eastern Energy Land Use Team, cooperative research units, or other applicable entities of FWS and BLM's DSC. Such meetings shall be initiated, scheduled, and organized by mutual agreement of appropriate officials of both Agencies. Both FWS Area Managers and BLM State Directors and OCS Office Managers shall participate in such meetings when appropriate. Agenda items should provide for discussion/resolution of Agency needs and priorities relative to wildlife related considerations.

F. Information/Data Sharing

Principles: A wide variety of biological, ecological, and scientific information, published and unpublished, exists within both Agencies. This includes information relating to resource conditions and trends, wildlife and habitat inventories and baseline studies, economic or other values, demand/supply, and use statistics. Free exchange of this information in compatible and standardized formats is essential.

Procedures:

1. Each Agency shall furnish or otherwise make available unpublished resource information and data to the other, upon request, when it is practical to do so.

2. Each Agency distributes technical publications and resource materials to aid in communications and to present program/activity information and results. Each Agency shall ensure that appropriate field and headquarters offices of the other Agency are included in any such mailing lists maintained by its organizational elements.

3. Both Agencies shall explore ways to improve the exchange and distribution of resource-related materials which may be applicable to the planning, decisionmaking, and evaluation needs of the other.

4. Both Agencies shall move expediently to implement mutually agreeable procedures for information/data collection, storage, or associated matters resulting from the Interagency Agreement Relative to Classification and Inventory of Natural Resources.

G. Endangered Species Consultation

Principles: Both Agencies are firmly committed to the protection of T/E species. Both also recognize the need and requirements for close consultation on any action which may affect such species or their habitats.

Procedures/Consultation:

1. General

(a) Whenever it is found that T or E species or their habitat may be affected by BLM activities, the concerned BLM State Director or OCS Office Manager must initiate consultation in accordance with Interagency Cooperation Regulations. Consultation may be necessary for species proposed for listing in construction type actions. To the extent that the concerned BLM State Director or OCS Office Manager and the FWS Regional Director can agree, and as provided for in the above regulations, an aggregate approach to consultation on the public lands will be followed.

(b) Whenever FWS finds that additional data are needed upon which to issue a biological opinion, such data must be provided by BLM before the consultation process can be concluded.

(c) It is jointly agreed that not all habitat modifications are prohibited, only those which destroy or adversely modify habitat essential to the conservation of a listed species.

(d) The FWS will provide methodology, expertise, and recommendations, upon request, to help resolve operational problems caused by endangered species on public lands.

2. Recovery Teams

(a) FWS shall provide technical leadership in developing and coordinating recovery plans for T or E species.

(b) BLM shall be afforded an opportunity to participate on recovery teams where such plans involve species inhabiting the public lands under its control.

(c) Recovery teams will not obligate either Agency to expend funds or establish specific time schedules for actions, but may recommend needed actions.

H. Sikes Act Cooperation

Principles: Both Agencies agree to the need for maintaining guidelines and procedures for the planning, coordination, and development of fish and wildlife programs under authority of the amended Sikes Act.

Procedures:

1. BLM will develop and implement comprehensive programs for conservation and rehabilitation of wildlife resources on the public lands under its control.

2. FWS, upon request and within its capability, will provide technical assistance to BLM relative to such comprehensive plans for management of the public lands under BLM control.

3. State cooperative wildlife management plans developed in accordance with the Act shall be coordinated to the extent practical with statewide comprehensive plans developed under authority of the amended Fish and Wildlife Restoration Act, Public Law (P.L.) 91-502.

I. Fish and Wildlife Diseases

Principles: A variety of diseases are capable of inflicting heavy losses among fish and wildlife populations. To minimize losses from disease, both Agencies recognize the need for close cooperation in the early detection, quick and accurate diagnosis, and rapid implementation of suitable control activities.

Procedures: BLM State Directors, FWS Area Managers--and where appropriate--OCS Office Managers will prepare contingency plans which will describe procedures and methods for combatting disease outbreaks which occur on public lands.

J. Fish and Wildlife Coordination Act Cooperation

Principles: Both Agencies agree that the Fish and Wildlife Coordination Act should be read and interpreted in the light of its primary purpose. Recognizing exclusions provided by Section 2(h) of the Act, the purpose is nonetheless to ensure that fish and wildlife and associated environments be given equal consideration and be coordinated with other features of water resource development programs.

Procedures:

1. BLM will consult--at the earliest appropriate stage of its planning process--with the FWS and with the appropriate State wildlife agency when it is proposing to construct or to permit actions involving water development that is not considered routine land management activities.

2. FWS will review and/or study the proposed water development activity and will prepare a report to BLM which will assess or concur in BLM's assessment of project impacts on fish and wildlife resources. In addition, FWS will make recommendation and/or concur with BLM's recommendations on (1) how to prevent or compensate loss of fish and wildlife and associated resources, and (2) to improve or enhance these resources.

3. BLM will give full consideration in its decisions to the report and recommendations made by the FWS and will incorporate into the permit or lease appropriate stipulations that would prevent, compensate, and/or enhance fish and wildlife resources.

K. Permit Regarding Work Affecting Navigable Waters, Waters of the United States, and Ocean Waters

Principles:

The Secretary of the Interior has delegated to the FWS the responsibility for investigating and reporting on applications for permits for dredging, filling, excavation, discharge of dredged or fill material, and other activities, including construction of facilities and works in the navigable waters and ocean waters of the United States issued by the Corps of Engineers (503 DM 1, August 3, 1973). Permits pursuant to the Rivers and Harbors Act of 1899, the Clean Water Act of 1977, the Marine Protection, Research, and Sanctuaries Act of 1972, and other applicable legislation may be required for activities conducted on public lands and waters under the control of BLM. Such permits may or may not fall under the provisions of 503 DM 1.

Procedures:

1. Proposals and applications for applicable activities and operations on public lands under BLM control and conducted by the BLM shall be coordinated by the BLM District Offices with the appropriate FWS Area or Field Office. BLM shall consult with FWS before a formal application is made to the appropriate regulatory agency.

2. For all permit applications falling under the provision of 503 DM 1, BLM District Offices will be responsible for arranging for the receipt of permit applications, reviewing them in accordance with their program interests, communicating any recommendations on such applications promptly to the FWS Area or Field Office, and cooperating in resolution of differing views pursuant to Section 503.1.3 E.

L. Wild Horses and Burros

Principles: Both Agencies recognize the need for cooperative management of wild free-roaming horses and burros which normally range on their lands.

Procedures:

1. BLM State Directors and FWS Area Managers will develop agreements and, as appropriate, joint plans for the management of wild horses and burros which range interchangeably upon the lands of the other.

2. BLM State Directors shall consult with FWS Area Managers in those areas where wild free-roaming horses and burros are found to determine appropriate management levels for these animals and whether actions should be taken to remove excess animals.

M. Fire Management and Protection

Principles: The need for sound wildland fire management programs, rapid response to wildfire in high danger situations, and efficient utilization of fire control personnel and equipment is jointly recognized. Further, the use of prescribed burning as a habitat or other resource management tool will be practiced by both Agencies, to the extent appropriate.

Procedures: Each Agency will provide fire management assistance to the other as determined by appropriate field officials. Fire suppression capabilities of both Agencies will be coordinated, as appropriate, through the Boise Interagency Fire Center and through field officials designated by BLM State Directors and FWS Area Managers.

N. Animal Damage Control

Principles: All native animals are important in the functioning of public land ecosystems and are resources of value and interest to the people of the United States. It is recognized, however, that ADC measures are sometimes necessary for the protection of human health and safety, forest and rangeland resources, agricultural crops, and livestock.

Procedures:

1. General

(a) The program will be consistent with the President's predator damage control policy and the goals and policies of the Secretary's November 8, 1979, decision on the ADC program.

(b) The program will be operated within the framework of a statewide plan to be developed by FWS Area Managers with input from BLM and other agencies, as deemed appropriate.

(c) Where an active ADC program exists in a BLM District, the FWS will annually develop a plan setting forth predator damage management activities designed to alleviate documented livestock loss and respond to requests for control services. Such plans will be coordinated with the State wildlife agency.

(d) Authorization for predator damage control will be based on livestock operator requests and demonstrated need based on losses verified by FWS.

(e) To ensure an expeditious response to livestock damage problems, livestock operators will submit requests for predator control services directly to the FWS, in accordance with the ADC plan.

(f) Where there is a need for measures to resolve rodent damage problems, planned control activities will be incorporated into the plan based on needs identified by the BLM, FWS, and other appropriate sources.

(g) Predator damage control will be directed toward individual predators causing the damage rather than the general population and will be limited to the specific area where losses due to predators have been verified.

2. The FWS will:

(a) Take the lead in preparation of an annual operational predator management plan for each BLM District.

(b) Review and evaluate requests for control and conduct control work as provided for in the ADC plan pertaining to public lands.

(c) Ensure that the ADC activities are compatible with existing policies and all appropriate laws and regulations.

(d) Be responsible for overall coordination and management of the ADC program, including arrangement of interagency meetings whenever needed.

3. The BLM will:

(a) Identify and delineate human safety zones and similar areas where ADC will be restricted or not allowed.

(b) Participate in the evaluation of the need for ADC (including rodent) programs for the protection of BLM resources.

(c) Determine whether ADC will be authorized on the public lands under its stewardship and the manner in which such control shall be implemented.

O. Cadastral Surveys

Principles: Cadastral surveying involves the creation and reestablishment of public land boundaries, the subdivision of the areas, and the determination of the amount of area within such surveys; the preparation of the official plat and written record of these surveys to be used in describing lands for patents, leases, or retention for Federal management purposes; and the preparation of protracted Federal boundaries over unsurveyed lands and offshore areas on the OCS.

Procedures:

1. Departmental cadastral surveying will follow the Manual of Instructions for the Survey of the Public Lands of the United States (1973 edition), and its amendments and supplements published by BLM. (see 757 DM 2.7.)

2. The BLM is responsible for the administration, coordination, and execution of the Public Land Survey System (PLSS). This includes the establishment and maintenance of a system for the storage and dissemination of survey data for use by local and national realty, land title, and mapping interests. The data also includes the geographic coordinates of all corner positions established or reestablished under, or directly related to, the PLSS. BLM is the custodian of the official U.S. public land survey records and maintains public information centers in those States which still have active cadastral survey programs and in Washington, D.C. BLM is also responsible for establishing a direct line of cadastral survey data communication to the Department's National Mapping Program (U.S. Geological Survey (USGS)) on a continuing basis (see 757 DM 2.3B, National Mapping Program).

3. BLM responsibilities include the segregation by survey of valid private rights acquired through a variety of public land laws, including the general mining laws. BLM is also responsible for determining the Federal offshore boundaries on the OCS.

4. The FWS will coordinate its cadastral surveying needs with BLM and will report to BLM all actions taken which serve to change the official PLSS records.

5. FWS shall submit its requirements for cadastral surveys to BLM with adequate lead time for program implementation. BLM will determine the appropriate action necessary to satisfy the needs of each request. This may include the use of existing survey data or original surveys or resurveys by BLM. Such surveys are normally provided by BLM on a reimbursable basis. In those cases where BLM authorizes FWS to perform the actual survey work, BLM will provide the necessary instructions, guidance, and official approval of the records. The records of such surveys will then also enter the public domain.

P. International Activities

Principles: In the development and implementation of international treaties, agreements, and legislation, both Agencies will work cooperatively in the study, protection, and management of wildlife and other matters of mutual interest.

Procedures:

1. Each Agency will keep the other apprised of international actions of mutual concern.

2. Where mutually beneficial, both Agencies will jointly develop and implement programs to carry out international responsibilities.

Q. Withdrawals

Principles: The FWS and BLM jointly recognize that the National Wildlife Refuge System (NWRS) is an independent land management system mandated by statute and that it is appropriate for public lands needed for units of the system may be made available through section 204 withdrawal. It is also recognized that public lands needed for the system or for other FWS uses such as fish hatcheries, administrative sites, research areas, etc., be kept to a minimum necessary for proper administration of such areas.

Procedures:

1. To the greatest extent practical, alternatives to outright withdrawal of public lands will be considered along with withdrawals. Such alternatives include cooperative agreements and rights-of-way.

2. FWS and BLM agree that discretionary mineral leasing operation on lands withdrawn for FWS purposes shall be allowed after compatible and enforceable lease stipulations and terms have been agreed to by FWS.

3. It is recognized that most FWS lands are not subject to section 204(1) review provisions of the Federal Land Policy and Management Act of 1976. However, except for units of the NWRS, wherein by statute only Congress can remove lands from the System, the FWS will make every effort to return other withdrawn public land to BLM administration when such lands are no longer needed for FWS purposes.

4. FWS and BLM will cooperate to the fullest extent possible in order to process withdrawal applications to completion in a timely manner.

5. BLM shall promptly furnish FWS the status of pending applications for withdrawal and restorations upon request.

R. Pesticides and Other Toxic Substances

Principles: The application of pesticides is sometimes essential in the management of public lands for the protection of resources. It is recognized, however, that both positive and negative habitat changes may result from pesticide applications.

Procedures:

1. Pesticide applications on public lands will be operated within the framework of BLM and Departmental policies. All such applications will adhere to the stipulations regarding use set forth in the registration labeling of the Environmental Protection Agency, which has the primary responsibility for directions regarding use and the safety of the chemicals labeled for use (P.L. 92-516).

2. FWS has expertise which BLM may request for special projects involving the use of pesticides and other toxic substances.

VI. RELATIONSHIPS TO STATE, OTHER AGENCIES, AND INSTITUTIONS

Nothing in this MOU is intended to modify in any manner the present or future cooperative programs of either Agency with States, other public agencies, or educational institutions.

VII. OBLIGATION OF FUNDS

Nothing in this agreement shall be construed as obligating either party to the expenditure of funds in excess of appropriations authorized by law or otherwise commit either Agency to actions for which it lacks statutory authority.

VIII. RELATIONSHIPS TO PREVIOUS MEMORANDA OF UNDERSTANDING

The previously developed MOUs listed below become annexes to this Master MOU on the date subscribed by the last signatory, and are not changed by this agreement without prior joint review and concurrence. These include:

A. Interagency Coordination in Nonemergency Critical Habitat Determinations pursuant to Section 7 of the ESA of 1973 (effective March 18, 1976) (Annex I).

B. Responsibility Definitions for OCS Operations (GS-BLM-FWS) (effective November 8, 1972) (Annex II).

C. MOU concerning OCS Activities (effective March 30, 1976) (Annex III),

D. MOU between BLM, FWS, and USGS concerning OCS Environmental Research and Monitoring Activities (effective April 30, 1976) (Annex IV).

E. MOU between BLM, FWS, and USGS on Geothermal Cooperative Procedures (effective June 6, 1976) (Annex V).

F. MOU between BLM and FWS on Mutual Law Enforcement Support (effective February 23, 1978) (Annex VI).

G. MOU on Coal (effective September 26, 1978) (Annex VII).

The previously developed MOUs listed below are rescinded upon signature of this MOU since appropriate components are incorporated in this agreement.

A. Sikes Act (P.L. 93-452) Implementation (effective November 4, 1975).

B. Interagency Committee on Program Coordination (effective January 23, 1975).

C. Joint Subcommittee on Energy and Minerals Development (effective October 6, 1975).

Encl. 1-16

D. Joint Subcommittee on Wildlife Management (effective October 7, 1975).

E. Joint Subcommittee on Program and Budget Development (effective October 30, 1975).

IX. EFFECTIVE DATE, REVIEW, AMENDMENT, AND TERMINATION

This agreement shall become effective upon the date subscribed by the last signatory, and shall remain in force until terminated by either Agency upon 90-days written notice. It shall be reviewed by all parties no later than Calendar Year 1981 for adequacy and timeliness. Amendments to existing wording within this agreement may be proposed by either Agency at any time and shall become effective upon joint approval.

X. BUDGET COORDINATION

To ensure maximum compatibility of budgetary requests and the subsequent distribution and utilization of funds, the following coordinating functions shall apply:

A. Joint Review of Budget Materials

1. Each Agency shall provide the other an opportunity to review budgetary material relating to activities of mutual concern; e.g., coal.

2. To the extent possible, review opportunity shall be given sufficiently in advance of budgetary due dates to permit meaningful input and discussion before such budget material becomes final.

3. Neither Agency shall advance a program which is directly linked or referenced to the activities, actions, or authorities of the other Agency which has the lead for those activities or actions without advance consultation and mutual understanding as to the nature of that program and actions to be undertaken within the scope of this agreement.

4. Budget materials as used herein apply to Departmental Program Strategy Papers, Office of Management and Budget Estimates, Budget Justifications for Congressional Review, and any amendments or supplementals thereof.

B. Budget Year Consultation

1. Where the budget (or appropriations act) for the upcoming fiscal year (FY) in one Agency contains funds or positions earmarked for direct transfer to the other Agency, such funds and positions shall be identified in writing prior to the start of the FY for budget planning.

2. Where funds and manpower are to be retained in the Agency, but are to be committed toward those efforts involving both Agencies, each

Agency shall, to the extent known, inform the other as to the approximate level of direct funding, its distribution, and expected accomplishments for the upcoming FY. Each Agency's plans shall be communicated to respective field offices to facilitate further coordination at the State-Regional level.

3. Funds earmarked for cooperative research shall be identified and transferred to the Agency designated as "lead Agency" for the research project.

C. Coordination Points

Coordination activities, as described in this section, shall be the primary responsibility of:

For BLM - Chief, Office of Budget

and

For FWS - Assistant Director - Planning and Budget

XI. CONFLICT RESOLUTION

Should interagency controversy arise at any working level, the facts regarding such controversy shall be forwarded to the next higher level of authority for resolution.

5/27/80
Date

Frank Gregg
Director, Bureau of Land Management

05-27-80
Date

Lynn A. Greenwalt
Director, Fish and Wildlife Service

I. Introduction

The following section is hereby incorporated into Section V of the MOU signed by Bureau of Land Management and Fish and Wildlife Service on May 27, 1980. The purpose of this amendment is to set forth relationships relative to oil, gas and associated products pipelines consistent with Section IX of the umbrella MOU.

II. Principles

Section 28 (c)(2) of the Mineral Leasing Act of 1920, as amended, and applicable regulations (43 CFR 2880) authorize the Secretary of the Interior, through BLM, to grant or renew rights-of-way (ROW) and/or Temporary Use Permits (TUP) and to enter into cooperative agreements with other Federal agencies to expedite review of ROW and TUP applications for construction, operation and maintenance of oil, gas and associated products pipelines whenever such a project will cross lands administered by two or more Federal agencies. Whenever such a pipeline involves the statutory responsibilities of both the FWS and BLM, close coordination is essential and shall be guided by the following procedures.

III. Procedures

1. Each bureau shall notify the other as soon as a proposed pipeline becomes known.

2. The appropriate FWS Area Office shall notify the appropriate BLM State Office of any proposed pipelines crossing FWS administered lands.

3. Project specific cooperative agreements between the lead FWS Area Office and BLM State Office may be required to define procedures to be used. These procedures will address relevant involvement in the needed environmental analysis, review and comment on the ROW Grant, TUP's and associated terms and conditions and other matters related to mitigating fish and wildlife adverse environmental impacts.

4. Both Bureaus shall follow Departmental cost recovery guidelines and respective Bureau procedures in the collection and transfer of funds, and in the estimating and reporting of project obligations. Reimbursable costs will include direct and indirect agency costs (exclusive of management overhead) for project related activities, including:

    1. Preparation of an environmental analysis.

    2. Section 7, Endangered Species Act Assessment.

    3. Review and processing applications for TUP's.

    4. Review and processing applications for R/W grants.

    5. Development and review of grant and permit terms and conditions, including Notices-to-Proceed.

    6. Review of project design and environmental plans.

    7. Project monitoring and enforcement during the construction, operation, maintenance, and termination phases.

    8. Special studies, as required and approved.

5. Prior to issuing a grant for a ROW across lands in the National Wildlife System, the BLM Authorized Officer must have a signed Compatibility Statement from the FWS Regional Director as required by 16 U.S.C. 668dd (d)(1)(B). The terms and conditions of the ROW grant must include mitigation requirements for crossing FWS administered lands in accordance with 50 CFR 29.21-7(c). The fair market value for ROW across FWS administered lands shall be determined separately and receipts deposited into the Migratory Bird Conservation Fund for National Wildlife Refuge System lands and to the Revenue Sharing Fund for other FWS lands.

6. The FWS has certain responsibilities on all pipeline projects, whether or not they cross FWS lands. The FWS level of involvement will be determined by statutory responsibilities and the potential effects of the project on fish and wildlife resources.

Approved: Lynn A. Greenwalt
Director, Fish and Wildlife Service

Date: 09-19-80

Approved: Frank Gregg
Director, Bureau of Land Management

Date: 9/26/80

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COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

May 21, 1945

The Honorable

The Secretary of Agriculture.

Sir:

This Department agrees with the suggestion in your letter of April 13, that before mineral leases are issued for lands in national forests the Forest Service should have an opportunity to suggest adjustments that would avert conflict with necessary activities of that Service.

The Commissioner of the General Land Office has been instructed to inform the Forest Service promptly upon the filing of any lease application for national forest lands. In order that this procedure may function without causing undue delay in the issuance of leases, it is essential that prompt action be taken by the Forest Service. Necessarily, a period of time must elapse between the filing of an application and the offer of a lease to the applicant in order to permit its processing. This should afford sufficient time for a report from the Forest Service, suggesting appropriate stipulations to be incorporated in the lease for the protection of properties or rights in the forest.

The stipulation under the provisions of enclosed Circular 1450 with reference to location and maintenance of camp sites will continue to be required and there will be no change in the policy of transmitting to the Forest Service copies of all oil and gas leases issued for lands in national forests.

Very truly yours,

/s/ OSCAR L. CHAPMAN

Assistant Secretary.

Enclosure 34893

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UNITED STATES
DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

April 13, 1945

The Honorable
The Secretary of the Interior

Dear Mr. Secretary:

Your Department, in its execution of the public land laws applicable to lands reserved for national forest purposes, has rather generally and consistently followed the practice of apprising this Department of pending applications, entries, filings, withdrawals, etc., which, if granted or approved, would affect the status or the subsequent use and occupancy of the national forest lands. Under long established and effectively functioning procedures, this Department then determines and advises you as to the probable consequences to public interest if the described lands are subjected to the proposed easement, right-of-way, appropriation or withdrawal; or as to the special stipulations required to safeguard public interest and property.

By this procedure, lands upon which material Federal expenditures have been made, or which are or will be urgently needed for the development, administration and management of the national forests or for use by the public, are brought to your attention before they are passed to other ownership or subjected to contractual commitments not consistent with their basic and permanent public values; or steps are taken to have the applicant execute such stipulations as may be necessary to safeguard public interest. The general practice exemplifies good interdepartmental cooperation and correlation.

But one increasingly important class of cases is not now subject to this general practice; that is, leases under the Federal Mineral Leasing Act of February 25, 1920, and acts amendatory thereof or supplementary thereto. In earlier years such leases were not sufficiently numerous nor extensive to cause concern, but the present trend of oil and gas development is towards the national forest areas and the leases are multiplying in number. Under current practice, this Department receives no notice of such leases until after they have been issued, except in the rare case where the application embraces a tract formally withdrawn as an administrative site on the records of the General Land Office.

By letter of May 1, 1922, the Secretary of Agriculture advised the Secretary of the Interior that notice of applications for permits to prospect for oil, gas, coal, phosphate, etc., under the Act of February 25, 1920, need not be sent to this Department; but that the Department desired that applications for leases under the Act be sent the Forest Service for consideration since local conditions in some cases might make it advisable that the lease when granted contain special stipulations or conditions for protecting the Government's interests in the national forests. We can find no record of any subsequent change in this viewpoint of the Department; but there has been no general compliance with the Department's request.

The situation recently has been exemplified by an oil and gas lease to the Ohio Oil Company, G.L.O. Serial 09617, involving lands acquired by exchange under the Act of July 31, 1912 (37 Stat. 241) in the Huron National Forest, Michigan. Among the tracts to which that lease has been made applicable is one comprising a developed public campground, another a developed Y.M.C.A. Organization Site, and another a group of sites planned and developed for summer home occupancy under special use permit. Oil and gas activities obviously would be incompatible with the types of use to which the tracts have been devoted, yet such activities have been authorized under lease issued by the General Land Office. In connection with these and other associated lands, the Chief of the Forest Service, by letter of December 11, 1944, apprised the Commissioner of the General Land Office of existing occupancies and asked that before leases were issued the Forest Service be afforded an opportunity to review them and suggest adjustments that would avert conflict. However, that procedure was not followed. A similar principle or procedure of general applicability was proposed by the Chief of the Forest Service in a letter to the Commissioner of the General Land Office under date of July 24, 1944. Its adoption would bring interdepartmental action on oil and gas leases into conformity with that long followed in relation to other forms of land occupancy, utilization or alienation. Your approval of such procedure would be appreciated.

Sincerely,

/s/ CHARLES F. BRANNAN

Assistant Secretary

UNITED STATES DEPARTMENT OF AGRICULTURE, UNITED STATES DEPARTMENT OF THE INTERIOR AND STATES OF IDAHO, MONTANA, WYOMING, AND WASHINGTON MEMORANDUM OF AGREEMENT TO REVISE AND EXPAND THE INTERAGENCY GRIZZLY BEAR COMMITTEE

A. Need:

The grizzly bear is listed as a threatened species in the 48 conterminous States under provisions of the Endangered Species Act of 1973, as amended. To achieve the recovery of the grizzly bear, it is necessary that all Federal and State agencies with responsibilities for this species coordinate their management and research actions to the greatest extent possible to insure the best utilization of available resources and prevent duplication of effort.

To attain the objectives established by the Grizzly Bear Recovery Plan, the United States Department of Agriculture (U.S. Forest Service), the United States Department of the Interior (Fish and Wildlife Service, National Park Service, Bureau of Land Management, Bureau of Indian Affairs), and the States of Idaho, Montana, Wyoming, and Washington find it in the best interest of the grizzly bear to revise and expand the Interagency Grizzly Bear Committee (IGBC) established in April 1983).

B. Organization:

Members

3 Regional Foresters, USDA Forest Service
1 Regional Director, National Park Service
1 Regional Director, U.S. Fish and Wildlife Service
1 State Director, Montana, Bureau of Land Management
1 State of Idaho Representative)
1 State of Montana Representative) Named by
1 State of Wyoming Representative) Appropriate Governor
1 State of Washington Representative)

Advisor

Grizzly Bear Recovery Coordinator, U.S. Fish and Wildlife Service

Invitees

In addition to the members specified above, the following parties involved with the grizzly bear management and research in the State of Washington may participate in the committee and attend committee meetings: Regional Forester, National Park Service Regional Director, and the Fish and Wildlife Service Regional Director. The Bureau of Indian Affairs Area Directors from Portland, Oregon and Billings, Montana and representatives from the Canadian Provinces of British Columbia and Alberta also are invitees to committee and subcommittee meetings.

Subcommittees

Yellowstone Ecosystem
- National Park Superintendent (2)
- National Forest Supervisor (5)
- State Representatives from Wyoming, Montana and Idaho
- U.S. Fish and Wildlife Service Representatives (2)

Northern Continental Divide Ecosystem
- National Park Superintendent (1)
- National Forest Supervisor (5)
- State Representative from Montana
- U.S. Fish and Wildlife Service Representative (1)
- Bureau of Indian Affairs and/or Tribal Representative from each Indian Reservation (2)
- Bureau of Land Management Representative, Montana (1)
- Canadian Representatives

Northwest Ecosystems
- National Park Superintendent (1)
- National Forest Supervisors (5-7)
- State Representatives from Montana, Idaho, and Washington
- U.S. Fish and Wildlife Service Representatives (2)
- Canadian Representative

Research
- U.S. Fish and Wildlife Service Representative
- U.S. Forest Service Representative
- National Park Service Representative
- States of Idaho, Montana, Washington, and Wyoming Representatives
- Bureau of Indian Affairs and/or Tribal Representative(s)
- Bureau of Land Management Representative
- Canadian Representatives
- (Existing Interagency Grizzly Bear Study Team to continue under Research Subcommittee.)

C. IGBC Operation:

1. Chairmanship of the IGBC shall rotate among representatives with the chairman serving a 2-year term, beginning with the representative of the U.S. Fish and Wildlife Service. Chairmen of the Research Subcommittee and Yellowstone, Northern Continental Divide and Northwest Ecosystems Subcommittees will be elected by Subcommittee members for 2-year terms.

2. Meet a minimum of twice per year, with additional meetings as needed and agreed to by majority of Committee.

D. IGBC Committee Responsibilities:

1. Implement the Grizzly Bear Recovery Plan, and all management and research activities necessary to provide for recovery of the grizzly bear.
2. Make provision for implementation of approved actions.
3. Guide and plan research direction.
4. Evaluate implementing activities to determine the effectiveness of achieving recovery plan objectives.
5. Take appropriate action under existing authority where necessary and make joint recommendations to Federal agency heads and States.
6. Review and approve or disapprove actions proposed by Subcommittees.

E. Northern Continental Divide Ecosystem, Yellowstone Ecosystem, and Northwest Ecosystems Subcommittee Responsibilities:

1. Implement management actions in a coordinated fashion.
2. Propose management policy to the IGBC.
3. Establish necessary task forces to implement aporoved actions when necessary (i.e., law enforcement, information and education, improvements).
4. Identify research needs and financial needs for management and submit to the IGBC.
5. Report to IGBC on progress concerning management actions necessary for grizzly bear recovery.

F. Research Subcommittee Responsibilities:

1. Identify and propose needed research programs to the IGBC as directed by the Grizzly Bear Recovery Plan.
2. Coordinate and direct needed research activities approved by IGBC.
3. Review and develop research plans to assure that they adequately address research needs and that the objectives, methods, analyses, timetables, and budgets are valid and realistic.
4. Establish ad hoc task forces to examine and report on special topics as approved by IGBC.
5. Review research findings and reports for scientific validity and make recommendations to IGBC on their adequacy or relevance for assisting management decisions. Circulate these reports for peer review when necessary.

John B. Crowell

John B. Crowell, Jr. 5 January 1984

U.S. Department of Agriculture Date
Assistant Secretary for Natural Resources
and Environment

G. Ray Arnett 5 Dec 83

U.S. Department of the Interior Date
Assistant Secretary for Fish
and Wildlife and Parks

Garrey E. Carruthers 12/31/83

U.S. Department of the Interior Date
Assistant Secretary - Land
and Water Resources

Kenneth L. Smith 1/4/84

U.S. Department of the Interior Date
Assistant Secretary for Indian Affairs

John V. Evans

John V. Evans 2-6-84

State of Idaho Date

Ted Schwinden

Ted Schwinden 3/1/84

State of Montana Date

John Spellman 3/21/84

State of Washington Date

Ed Herschler 4/5/84

State of Wyoming Date

send to [illegible], refuge manager
Red Rock Lakes NWR
Monida Star Rt., Box 15
Lima, Montana 59739

Agreement 14-16-0006-84-960

Cado

COOPERATIVE AGREEMENT

between

BUREAU OF LAND MANAGEMENT

and

FISH AND WILDLIFE SERVICE

and

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

and

THE PEREGRINE FUND, INC.

THIS COOPERATIVEE AGREEMENT is made and entered into this 15th day of April 1984, by and between the BUREAU OF LAND MANAGEMENT, hereinafter referred to as "BLM", the U. S. FISH AND WILDLIFE SERVICE, hereinafter referred to as "FWS", THE MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS, hereinafter referred to as "MDFWP", and THE PEREGRINE FUND, INC., WITNESSETH THAT:

WHEREAS, MDFWP is the principal wildlife management authority in Montana and desires to reestablish wild populations of peregrine falcons in the state, and,

WHEREAS, BLM and FWS jointly have suitable habitat for breeding peregrine falcons in the Centennial Valley of Montana, more specifically, the Red Rock Lakes National Wildlife Refuge and vicinity, and desire to reintroduce this endangered species to establish a viable breeding population, and,

WHEREAS, The Peregrine Fund, Inc., has the peregrine falcons, the expertise to make the reintroduction, and desires to do so,

NOW, THEREFORE, it is mutually understood and agreed upon by the parties concerned, the following stipulations:

1. The Peregrine Fund, Inc., the vendor:

   a. Shall identify a suitable location for placement and operation of a hack site for peregrine falcons (Falco peregrinus anatum). The site selection shall be in consultation with MDFWP, BLM, the Dillon Resource Area, and FWS, Red Rock Lakes NWR. The primary area for location of the hack site shall be in the Centennial Valley in the vicinity of the Red Rock Lakes NWR.

b. Add the following as paragraphs G, H, and I

G. The FWS shall provide the 200 gallon fire pump and the LRFD shall provide the fire truck for this cooperatively managed pumper unit.

H. The FWS agrees to maintain the truck and pumper unit, and store both at refuge headquarters, Lakeview, Montana.

I. The pumper unit will be used to respond to fires as outlined in the Memorandum of Understanding signed by both parties and which is currently in effect.

2. Article IV, Period of Performance is deleted in its entirety and the following substituted in lieu thereof:

The period of performance of this memorandum of understanding shall be from October 1, 1984 through September 30, 1989.

3. Article V, Financial Administration is deleted in its entirety and the following substituted in lieu thereof:

V. When requested assistance is provided by either party, each shall be responsible for and pay its own incurred costs, and no reimbursement shall be made by the protecting agency to the other.

4. Article VIII Changes, ADD the following:

Any change to this memorandum of understanding shall be issued in writing, and signed by the Contracting Officer of the Fish and Wildlife Service and an authorized official of the Fire Department.

MEMORANDUM OF UNDERSTANDING

COVERING

THE JACKSON HOLE COOPERATIVE ELK STUDIES GROUP

WHEREAS, the following agencies have legal responsibilities for the study and management of the Jackson Elk Herd and its habitat.

1. The Wyoming Game and Fish Commission has been created under the laws of the State of Wyoming to provide an adequate and flexible system of control, propagation, management, protection, and regulation of wildlife in Wyoming.

2. The U.S. Forest Service, under the laws of the United States and the regulations of the Secretary of Agriculture, is charged with research responsibilities and the sustained multiple use management of resources on National Forest lands;

3. The National Park Service, under the laws of the United States and the regulations of the Secretary of the Interior, is responsible for the management and control of National Park lands and waters together with the maintenance and preservation of the biota therein;

4. The U.S. Fish and Wildlife Service is responsible for migratory bird resources, inland sport fisheries, international agreements, Federal aid to States, wildlife enhancement and services, sport fisheries services, development and management of the National Wildlife Refuge System, and other programs including studies to recommend measures for the protection and improvement of these resources, and

WHEREAS, the Jackson Elk Herd is of major importance to the economy of the State of Wyoming and the biotic aspects of private and public lands in the vicinity of Jackson Hole, and

WHEREAS, the proper maintenance and management of the Jackson Elk Herd is subject to the varied responsibilities of the agencies named, and

WHEREAS, management goals for elk and the resources on which they and other mammals depend can be reached only through coordinated efforts of those agencies with legal responsibilities for wildlife and land management, and

WHEREAS, wise management must be based on results of basic fact finding studies on the elk herd and the land upon which it depends;

NOW, THEREFORE, the Wyoming Game and Fish Commission, through the Wyoming Game and Fish Department; the U.S. Forest Service, through the Bridger-Teton and Targhee National Forests; the National Park Service, through the Yellowstone and Grand Teton National Parks; and the U.S. Fish and Wildlife Service, through its regional office and the National Elk Refuge, subscribe to the following:

A. Organization of the Advisory Council and Technical Committee

Plans for future studies and actions pertaining to or affecting the welfare of the Jackson Elk Herd shall be coordinated through and by two committees (Advisory Council and Technical Committee) functioning under authority of this Memorandum of Understanding. These two committees shall carry on and be responsible for a program known as the "Jackson Hole Cooperative Elk Studies" and shall be organized as:

Advisory Council, composed of the administrators of those agencies having legal management responsibilities for the Jackson Elk Herd or land upon which it lives. Representation on this Council shall consist of the Director of the Wyoming Game and Fish Department, Supervisors of the Bridger-Teton and Targhee National Forests, Superintendents of Grand Teton and Yellowstone National Parks, and Regional Refuge Supervisor (R-6), U.S. Fish and Wildlife Service; provided, however, that the U.S. Forest Service, the National Park Service, the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department shall each have only a single vote on such council.

Technical Committee, composed of delegated technicians from the agencies on the Advisory Council and represented as follows: Two members from the Wyoming Game and Fish Department, two members from the National Park Service, representing Grand Teton and Yellowstone National Parks, two members from the U.S. Forest Service, one each from the Bridger-Teton and Targhee National Forests, and two members from the U.S. Fish and Wildlife Service. Additional members may be invited and may serve on the Technical Committee by unanimous approval of the Advisory Council.

B. Purposes of the Advisory Council and Technical Committee

Relative to studies and actions pertaining to the Jackson Elk Herd, the purposes of the Advisory Council shall be to:

1. Maintain a clear definition of agency responsibilities and jurisdictions.
2. Establish such policies as may be required for conducting the "Jackson Hole Cooperative Elk Studies."
3. Provide an inter-agency exchange of budget and planning, work load plans and limitations, and short range and long range study objectives.
4. Keep the Technical Committee informed of the above items and act in a consultant or advisory capacity to them in matters of administration and policy.
5. Instrument official representation on the Technical Committee as provided for in this document.
6. Invite and approve representation on the Technical Committee other than as specifically provided for in this document.
7. Provide for dissemination of public information or news issuing from activities of the Advisory Council or Technical Committee.
8. Provide for administrative coordination with any other agency or group not a member of this agreement.

9. Either independently, or upon petition by the Technical Committee, determine which land use and management actions that may affect the well-being of the Jackson Elk Herd are appropriate for consideration by the Technical Committee.

Relative to studies and actions pertaining to the Jackson Elk Herd, the purposes of the Technical Committee shall be to:

1. Provide for an open exchange of ideas in developing plans, programs, techniques and methods for management studies and actions.
2. Coordinate the programming of field studies and the possible exchange of personnel assistance in field operations.
3. Maintain a complete and open exchange of information and results, written or otherwise, of all studies by participating agencies and others.
4. Delineate and promote additional needed studies, particularly of a research nature, which may be outside the programs of participating agencies. Offer guidance in coordinating such studies into the needs for long range management of this elk herd and its habitat.
5. Invite, and provide for consultation, advice, or assistance from other technical people not members of this committee.
6. Evaluate and make recommendations dealing with appropriate land use and management actions, as determined by the Advisory Council.

C. Chairmanship

The chairmanship of both the Advisory Council and Technical Committee will be with one agency during each period of July 1 though June 30 and such chairmanship will rotate successively among the agencies in the following sequence as has been determined by lottery: Wyoming Game and Fish Department; U.S. Forest Service; U.S. Fish & Wildlife Service; U.S. National Park Service. The Advisory Council will meet at least annually during March.

D. Effective Dates and Amendments

This memorandum is effective as of July 1, 1958 and as amended on December 15, 1984, and shall continue in force thereafter as long as a useful purpose is served. It may be amended at any time by written consent of each member of the Advisory Council to the chairman of that council.

Any member may withdraw from participation in this Memorandum by 10 days written notice to the Advisory Council Chairman.

This Memorandum may be terminated at any time by written consent of each signatory agency to the Advisory Council Chairman.

WYOMING GAME & FISH COMMISSION

By F. Donald Dexter

Title Director

Date 1/18/85

BRIDGER-TETON NATIONAL FOREST

By Reid Jackson

Title Supervisor

Date 2-14-85

TARGHEE NATIONAL FOREST

By John E. Burns

Title Supervisor

Date 3/4/85

YELLOWSTONE NATIONAL PARK

By

Title Superintendent

Date 3/10/85

GRAND TETON NATIONAL PARK

By Jack E. Stark

Title Superintendent

Date 1/29/85

U.S. FISH AND WILDLIFE SERVICE

By Marvin

Title Acting Regional Director

Date 4/29/85

RED ROCK LAKES

A. Cooperative Agreements

1. Memorandum of Understanding and Modification of Contract between the U.S. Fish and Wildlife Service and Lima Rural F're District.
2. Cooperative Agreement between Bureau of Land Management and Fish and Wildlife Servbice and Montana Department of Fish, Wildlife and Parks and The Peregrine Fund, Inc.

B. Committee Membership

1. Trumpeter Swan Technical Committee
    a. Justin Nodarman, Idaho Non-game Biologist
    b. Don Childress, Montana Migratory Bird Coordinator
    c. Dave Lockman, Wyoming Migratory Bird Coordinator
    d. Barry Reiswig, Refuge Manager, Red Rock Lakes NWR
2. Southwest Travel Plan Group
    a. Jim Flynn, Director, Montana Department of Fish, Wildlife and Parks
    b. Joe Wagenfher, Superintendent, Beaverhead National ~~[illegible]t~~ Forest, Montana
    c. Jack McIntosh, BLM District Manager, Montana
    d. Barry Reiswig, Refuge Manager, Red Rock Lakes NWR
3. Southwest Montana Fire Council
    a. Lima Fire District
    b. Ennis Fire District
    c. Sheridan Fire District
    d. Twin Bridges Fire District
    e. Dillon Fire District
    f. Red Rock Lakes NWR

Agreement No. 14-16-0006-84-975

MEMORANDUM OF UNDERSTANDING
between the
U.S. FISH AND WILDLIFE SERVICE
and
LIMA RURAL FIRE DISTRICT

I. PURPOSE

This Memorandum of Understanding shall become effective upon the date of approval by the Manager of the Red Rock Lakes National Wildlife Refuge, hereafter called the FWS, and the Chief of the Lima Rural Fire District, hereafter called the LRFD.

Because Red Rock Lakes National Wildlife Refuge in the Centennial Valley, Beaverhead County, Montana, is almost entirely surrounded by lands given fire protection by the LRFD; and the two agencies desire to cooperate in the suppression of forest and range fires in the Centennial Valley, this understanding is being formed. This should provide adequate protection for all lands involved.

II. AUTHORITY

Fire Protection Act of September 20, 1922 (42 Stat. 857; 16 U.S.C. 594); Reciprocal Fire Protection Act of May 27, 1955 (69 Stat. 66, 67; 42 U.S.C. 1856, 1856a and b).

III. SCOPE OF WORK

A. Definitions

1. "FWS lands" shall mean those federal lands administered as the Red Rock Lakes National Wildlife Refuge by the Refuge Manager.

2. "LRFD lands" shall mean lands in the Centennial Valley and its watershed given fire protection by the Lima Rural Fire District, Lima, Montana.

3. "Third Party lands" shall mean all lands not administered or given fire protection by the FWS or LRFD in the Centennial Valley and it's watershed.

B. LRFD agrees to have the primary responsibility for suppression of fires burning on LRFD lands.

C. FWS agrees to have the primary responsibility for suppression of fires burning on FWS lands.

D. Both agencies and their employees agree to report immediately the location of any fire they discover whether located on the lands of either agency or of a Third Party. The agency whose fire-fighting crew shall first reach the fire burning on FWS or LRFD lands is responsible for fighting that fire until relieved of such responsibility by the agency upon whose lands the fire is burning.

E. Each agency agrees to render assistance to the other in fighting fires on the lands of the other agency when it is the first to reach the fire. The Officer in Charge of the crew arriving at the fire will act as fire boss until the arrival of a crew from the agency which has primary responsibility, at which time he will place himself and his crew at the disposal of the Officer in Charge from the agency which has primary responsibility.

F. Each agency agrees to assist the other through the loan of men and equipment to suppress fires burning on the lands of the other agency, but neither agency is obligated to jeopardize the fire security on its own lands by the dispatch of all its available fire protective resources to a fire burning on the lands of the other agency.

IV. PERIOD OF PERFORMANCE

This Memorandum of Understanding shall continue in force and effect until terminated by agreement of the parties or by written notice by either party to the other; provided, that such notice shall only be given between the dates of November 1 of any year and April 1 of the following year.

V. FINANCIAL ADMINISTRATION

The effort cited under the terms of this agreement shall be accomplished at no cost to either party.

VI. PROJECT OFFICERS

U.S. Fish and Wildlife Service
Barry Reiswig, Refuge Manager
Red Rock Lakes NWR
Lima, Montana
Telephone 276-3347

Lima Rural Fire District
Ron Holton, Chairman
Grayson Phipps, Fire Chief
Lima, Montana

VII. SPECIAL PROVISIONS

Due to the fragile nature of portions of the refuge, and its Wilderness status a Modified Suppression Action Area (MSAA) has been developed for a significant part of the refuge (see attached map). Except during the "extreme" fire condition or the presence of private livestock under grazing permit, fires will be allowed to burn in the MSAA and suppression efforts will be concentrated on the Area boundary. If either the U.S. Forest Service or the Dillon Resource Area Bureau of Land Management predict the extreme fire danger for the Centennial Valley and surrounding area, or; there is threat of damage or loss to private livestock grazing in the MSAA, or; there is a threat posed to any livestock, life, or property outside the refuge boundary, full suppression will be conducted.

B. Neither party will be responsible to the other for any loss, damage, personal injury, or death occuring in the performance of this agreement.

C. Repairs Necessary to keep any equipment, covered by this agreement, in operation will be made at the expense of each party to their own equipment.

VIII. CHANGES

Prior to the first of April each year, the Refuge Manager and the Fire Chief will discuss fire control procedures so that necessary adjustments may be made prior to the start of the fire season.

IX. TERMINATION

Notice of termination of this understanding shall be given only between the dates of November 1 of any year and April 1 of the following year.

U.S. Fish and Wildlife Service

Name: Barry Reisiwg
Title: Refuge Manager
Date: 6-28-84
Signature:

Lima Rural Fire District

Name: Ron Holton
Title: Board Chariman
Date:
Signature: Ronald C Holton

CONCURRENCE

Name: Darrell L. Mahlik
Title: Chief, Contracting and General Services
Date: AUG 7 1984
Signature: Darrell L Mahlik

Name: Greyson Phipps
Title: Fire Chief
Date: 7/5/84
Signature:

Signature: ROBERT H. SHIELDS
Title: Acting Regional Director
Date: AUG 10 1984

NATIONAL ELK REFUGE

A. Cooperative Agreements

1. Memorandum of Understanding between the Bureau of Land Management and Bureau of Sport Fisheries and Wildlife.

2. Memorandum of Understanding Covering The Jackson Hole Cooperative Elk Studies Group.

3. Cooperative Agreement between the United States Department of the Interior, Fish and Wildlife Service, and the Wyoming Game and Fish Department Relative to Management of the National Elk Refuge.

4. Memorandum of Agreement on Siting of Seismograph Installation in the National Elk Refuge, Jackson, Wyoming.

5. Special Use Permit - Boys Scouts of America, Jackson District, P.O. Box 1844, Jackson, WY 83001.

6. Memorandum of Understanding between the State Highway Commission of Wyoming and the United States Department of Agriculture, Forest Service and Department of the Interior, Fish and Wildlife Service.

7. Memorandum of Understanding between Grand Teton National Park and the National Elk Refuge.

8. Cooperative Agreement and Amendment of Solicitation/Modification of Contract between the U.S. Fish and Wildlife Service and the Grand Teton Natural History Association.

B. Committee Membership

Jackson Hole Cooperative Elk Studies Group

1. Advisory Council
    - a. Mr. Jack Stark, Superintendent, Grand Teton National Park
    - b. Bill Morris, Eirector, Wyoming Game and Fish Commission
    - c. Reid Jackson, Supervisor, Bridger-Teton National Forest
    - d. John E. Burns, Supervisor, Targhee National Forest
    - e. Robert Barbee, Superintendent, Yellowstone National Park
    - f. Barnet W. Schranck, Refuge Supervisor, Region 6, Denver

2. Technical Committee
    - a. Bruce Smith, Biologist, National Elk Refuge
    - b. Garvice Roby, Biologist, Wyoming Game and Fish Department
    - c. Kent Schmidlin, Game Warden, Wyoming Game and Fish Department
    - d. Floyd Garden, Biologist, Bridger-Teton National Forest
    - e. Mark Orme, Biologist, Targhee National Forest
    - f. Bob Wood, Resource Management Specialist, Grand Teton National Park
    - g. Ken Czarowski, Resource Management Specialist, Yellowstone National Park

b. Shall provide three to six peregrine falcons of the subspecies anatum for the hacking operation.

c. Will operate and maintain the hack site until the falcons have successfully fledged, dispersed, and are no longer dependent on the station. This will entail two persons operating the hack site for a period of up to ten weeks. These people will be responsible for the welfare, monitoring and feeding of the birds. The vendor shall provide the necessary food, water and other items the birds may require during the hacking operation.

d. Shall remove all materials and refuse from the hack site and camp site at the end of the hacking operation and when no further activity is planned in succeeding years.

e. Is responsible for compliance with the Endangered Species Act of 1973, as amended, and obtaining all necessary state and federal permits.

f. Shall furnish MDFWP, BLM, and FWS a written report on the selection, operation and success of the hack site. The report shall be submitted within three months following completion of the hacking process.

2. FWS:

a. Will provide $4,000, to the Peregrine Fund, Inc., by means of a Purchase Order, prior to April 30, 1984, for the above services.

b. Provide assistance, as needed, in the selection of potential hacking sites and provide other consultation and assistance, as appropriate.

3. BLM:

a. Will provide $8,000 by purchase orders to the MDFWP, 3/4 ($6,000) payable prior to April 30, 1984 and the balance of $2,000 payable after receipt of a field report and final payment request voucher.

b. Provide assistance, as needed, in the selection of potential hacking sites and provide other consultation and assistance, as appropriate.

4. MDFWP:

a. Shall provide a properly constructed hack box.

b. Shall coordinate scheduling and placement of peregrine chicks at the Centennial site relative to other recovery efforts in such manner as to provide for optimum probability of success in the peregrine falcon recovery effort.

c. Shall conduct necessary liaison between peregrine recovery efforts in Montana and similar efforts in adjacent states.

d. Shall determine the priority of the Centennial sites relative to any and all peregrine recovery sites in the State of Montana.

e. Shall participate in final site selection(s) through ongoing consultation and field investigations.

f. Shall closely coordinate the selection of potential hack sites on BLM and/or FWS lands with the respective agencies.

g. Shall coordinate all field activities on BLM land with the Dillon Area Manager and on FWS lands with the Red Rocks Lake NWR manager.

h. Shall provide $4,000 to the Peregrine Fund, 3/4 ($3,000) payable prior to April 30, 1984 and the balance of $1,000 payable after receipt of the young peregrines.

i. Shall provide the FWS and BLM a field report by September 15, 1984 summarizing the current year's reintroduction effort covered by this agreement.

5. The establishment and operation of the hack site will be accomplished during the normal peregrine falcon breeding season (April through August) in 1984, unless unforeseen difficulties arise. Should the hacking operations not occur in 1984 the work shall be completed the following year (1985). Factors which could delay the hacking operation until 1984 include: 1) adequate numbers of captive reared peregrine falcons not being available, 2) other higher priority hacking sites preclude peregrine falcons being available, 3) potential predation problems, 4) unforeseen human disturbance occurring in the vicinity of the site, or 5) wild peregrine falcon production is deemed adequate for maintenance of the peregrine population in the general area.

6. Hack boxes placed on BLM and FWS lands will meet the necessary standards determined by cooperating agencies including location, design and color.

7. Althou this agreement is for or . one hacking operation, the parties anticipate continuing the program for a minimum of three years under similar agreements. Continuation of the program in future years will be contingent upon funding constraints and production of captive reared peregrine falcons.

BUREAU OF LAND MANAGEMENT

By_________________________
District Manager, Butte Office

Contract No.

FISH AND WILDLIFE SERVICE

By_________________________

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

By_________________________
Director

THE PEREGRINE FUND, INC.

By_________________________

RECORD OF DECISION

Oil and Gas Leasing Process

Environmental Assessment
Deerlodge, Silver Bow, Beaverhead, Madison & Gallatin Counties
Montana
USDA - Forest Service
Beaverhead National Forest

Based on the analysis and evaluation described in the Environmental Assessment, it is my decision to adopt Alternative C for the National Forest lands described in the report. The report assesses the broad affects associated with oil and gas leasing on the Beaverhead National Forest.

This alternative with mitigating measures specified, provides the best combination of physical, biological, social and economic benefits and is considered to be a preferable alternative. Under this alternative, leases will be granted with stipulations for surface protection. Applications will be evaluated against the Beaverhead Land Management Plan and against resource concerns identified in the environmental assessment. Appropriate stipulations, including "no-surface occupancy" in some instances will be applied to restrict oil and gas activities on portions or all of the given lease. Leasing procedures for areas recommended for further planning will be responsive to RARE II Final Environmental Statement. If unacceptable environmental impacts cannot be corrected, development will not be permitted.

Recommendations to issue or deny leases in areas that are designated for wilderness study under the Montana Wilderness Study Act of 1977 (PL 95-150) are not within the Regional Forester's authority. Authority to make recommendations for leasing in Congressionally designated study areas is retained by the Chief. The following described lands on the Beaverhead National Forest include Congressionally designated study areas. Their location is shown on Map 2.

- West Pioneer (RARE II 01006), 147,992 net acres
- Madison North (RARE II N1549), 47,417 net acres
- Madison South (RARE II S1549), 42,939 net acres

Lease applications received for lands in Congressionally designated study areas, including an estimated 10,890 acres of existing applications, will not be processed under Regional Forester's Authority as a result of this clarification.

Implementation of the oil and gas leasing process may take place on or after August 14, 1979. Questions regarding this Decision should be sent to the Forest Service, P.O. Box 7669, Missoula, MT 59807.

f/ Warren G. Davis
CHARLES T. COSTON
Regional Forester

August 14, 1979
Missoula, Montana

FINDING OF NO SIGNIFICANT EFFECT

Oil and Gas Leasing Process
USDA - Forest Service
Beaverhead National Forest

An Environmental Assessment that discusses oil and gas leasing of National Forest lands in Beaverhead, Madison, Gallatin and Silver Bow Counties, Montana, is available for public review in the office of the Beaverhead National Forest in Dillon, Montana.

The Beaverhead National Forest will carry out its oil and gas leasing program in ways that will create and maintain conditions under which man and nature can exist in productive harmony, and fulfill social and economic needs of present and future generations of Americans. Therefore, it has been determined that an environmental impact statement is not needed.

This determination was based upon consideration of the following factors, which are discussed in detail in the Environmental assessment: (a) appropriate stipulations, including no-surface occupancy in some instances, will protect the surface and surface functions on a lease area, (b) physical and biological effects will be limited to the area of planned development and use, (c) if unacceptable environmental impacts can not be corrected, development will not be permitted, and (d) the action will not have a significant effect on the human environment.

The responsible official is Charles T. Coston, Regional Forest, Northern Region, Federal Building, Box 7669, Missoula, Montana.

Robert W. Larse 8-7-79
for CHARLES T. COSTON Date
Regional Forester
Northern Region

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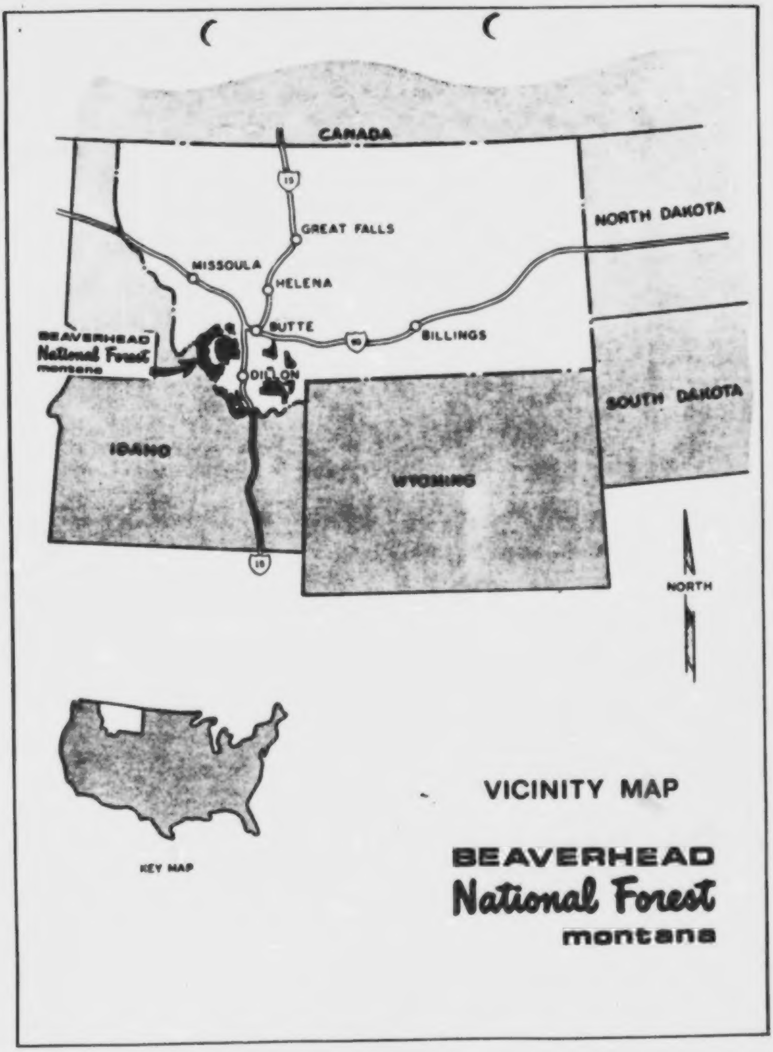

CANADA
NORTH DAKOTA
GREAT FALLS
MISSOULA
HELENA
BUTTE
BILLINGS
DILLON
BEAVERHEAD
National Forest
montana
15
90
IDAHO
WYOMING
SOUTH DAKOTA
NORTH
KEY MAP
VICINITY MAP
BEAVERHEAD
National Forest
montana

I. INTRODUCTION

Purpose

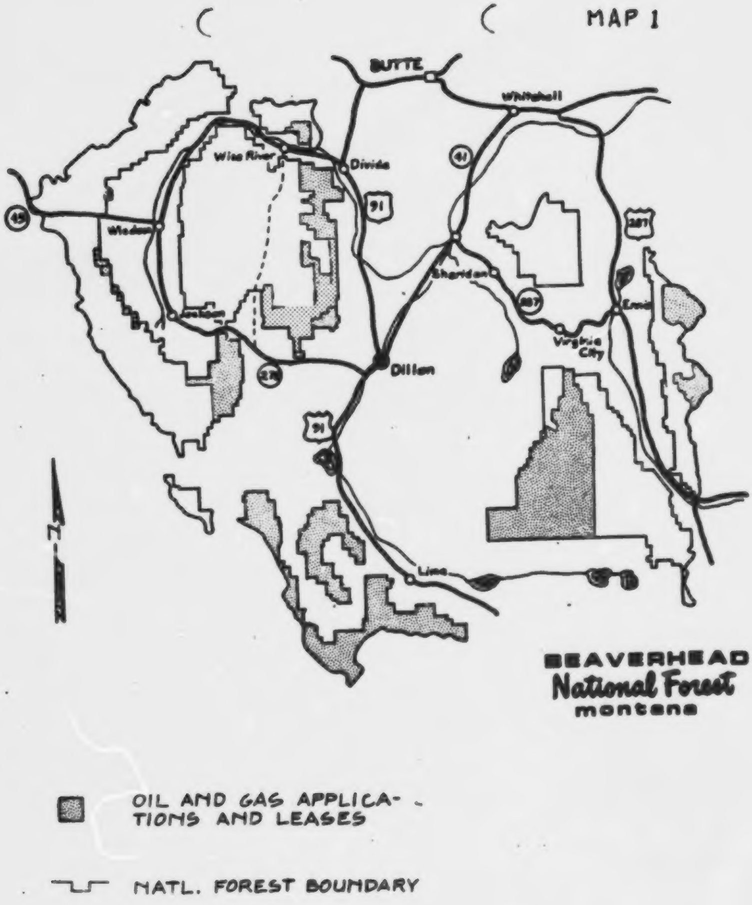
The purpose of and need for the environmental assessment is as follows: (1) to provide a basis for making recommendations to the Bureau of Land Management regarding (a) issuance of oil and gas leases and (b) the revision of existing no-surface-occupancy leases on the Beaverhead National Forest; (2) to determine if the action will have a significant effect on the quality of the human environment; and (3) to establish a procedure to determine appropriate conditions on leases to be recommended for issuance or revision.

Present Situation on the Beaverhead National Forest

A few oil and gas leases were routinely issued on the Beaverhead National Forest prior to 1975. Five leases with surface occupancy rights are still active, but no development has taken place.

Since 1975, interest in oil and gas has increased sharply. A total of 330 applications have been received since that date. These applications cover 633,930 acres (see map 1). Based on an Environmental Analysis Report (EAR) for Oil and Gas dated August 15, 1977, it was decided to issue only leases with "no-surface-occupancy" restrictions pending completion of the Beaverhead Land Management Plan. This was done to allow evaluation of the compatibility of oil and gas activities with other resource values identified through land management planning. It was also decided to allow preliminary exploration during the planning period since significant surface disturbance would not be involved in this activity. All of the applicants were asked if they would accept a "no occupancy" stipulation in their lease until further evaluation could be made. As a result of this inquiry, 145 leases were granted with a "no occupancy" stipulation. The remaining 185 applicants elected to leave their applications on file and wait until completion of the Land Management Plan for consideration of a lease. A final environmental statement was filed for the Beaverhead Land Management Plan on February 15, 1978. Except for several areas included in the RARE II process, the Land Management Plan is now in effect.

Of the 330 lease applications received to date, none occurs in designated wilderness area. A portion of the Anaconda-Pintler Wilderness area is within the Beaverhead National Forest. Leasing and development for minerals (including oil and gas) is allowable on National Forest land in designated wilderness areas until December 31, 1983, with ". . .such reasonable stipulations as may be prescribed by the Secretary of Agriculture for the protection of the wilderness character of the land consistent with the use of the land for the purposes for which they are leased. . . ." (16 USC 1131-1136). Lease actions within wilderness areas are not considered in this assessment. If applications are received to lease in wilderness areas, the decision to recommend or deny leasing would be made by the Chief of the Forest Service based on an environmental analysis that considers wilderness values.


MAP 1
BUTTE
Whitehall
Wise River
Divide
41
91
43
Wisdom
Jackson
278
Dillon
Sheridan
287
Virginia City
Ennis
91
Lima
N
BEAVERHEAD
National Forest
montana
▨ OIL AND GAS APPLICATIONS AND LEASES
NATL. FOREST BOUNDARY

OIL AND GAS LEASE AREAS -
Revised 5/6/80

The Forest Service RARE II (Roadless Area Review and Evaluation) Final Environmental Statement was made public in January 1979. RARE II areas are roadless lands being evaluated for possible addition to the Wilderness Preservation System. On April 16, 1979, the President announced his recommendations. The RARE II Final Environmental Statement as amended by the President, makes the following recommendations to Congress on areas in the Beaverhead National Forest (See Map 2):

Recommended for Wilderness	Total RARE II National Forest Acreage
B1001 North Big Hole	6,532
11943 West Big Hole	53,375
01008 East Pioneer	93,859

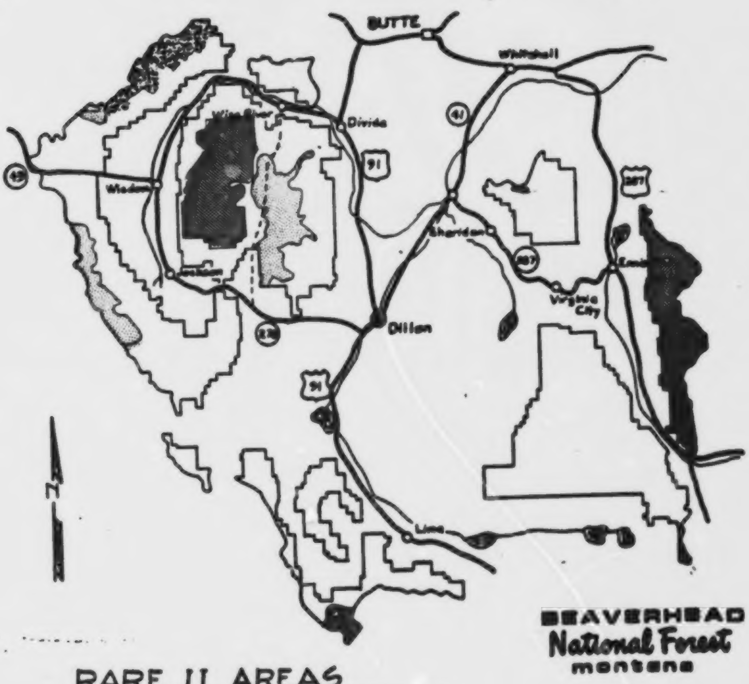
Recommended for Further Planning	National Forest Acreage
11945 Italian Peak	12,996
J1549 Madison**	29,826
N1549 Madison North*	47,417
S1549 Madison South*	42,959
01006 West Pioneer*	147,992
B1013 Middle Mtn-Tobacco Roots	2,000
01962 Mt. Jefferson	4,600

* Designated by Congress for study in Montana Wilderness Study Act.

** Designated by the Forest Service for study with the Madison Areas, N1549 and S1549.

Legislation to designate areas recommended for wilderness will be forwarded to the Congress for action. It is not known when Congress will take action on the President's proposal for such areas, but since the Administration has recognized the value of wilderness, the areas should be managed similarly to areas already in the Wilderness Preservation System. This means that until a decision on wilderness is made, lease applications in these areas would require an environmental analysis that considers wilderness values. Decisions to recommend or deny leasing in areas recommended for wilderness will be made by the Chief of the Forest Service. Currently there is one oil and gas lease application in an area proposed for wilderness status. The status of this application will not change as a result of this assessment.

MAP 2


BUTTE
Whitehall
Divide
Wise River
Wisdom
Jackson
Dillon
Sheridan
Virginia City
Ennis
Lima
43
41
91
287
278
N
BEAVERHEAD
National Forest
montana

RARE II AREAS

▨ PROPOSED WILDERNESS

■ FURTHER PLANNING

■ FURTHER PLANNING--Also Congressionally designated for study (PL 95-150)

WILDERNESS AREAS

▨ ANACONDA PINTLER

⌐ NATIONAL FOREST BOUNDARY

Roadless areas recommended for further planning will be managed to preserve the wilderness option until land management plans or specific project plans are completed. Recommendations for land allocation (either to wilderness or nonwilderness) will result from land management plans required under the National Forest Management Act (NFMA) or from the study associated with the Montana Wilderness Study Act.

The direction for oil and gas leasing for areas recommended for further planning is expl[illegible] The RARE II final Environmental Statement states in part on Page 9[illegible]

> "Unless there is additional exploration for oil and gas resources permitted in many areas allocated to further planning, subsequent wilderness - nonwilderness decisions will have to rely on data not much better than currently exists.
>
> "Exploration by drilling to determine oil and gas potential is essential in reaching conclusions in land management or project plans that allocate roadless areas.
>
> "For the above reasons, oil and gas exploration (including drilling where adequate exploration requires it) will be considered an integral part of the further planning process. Oil industry exploration proposals will be examined on a case-by-case, site-specific basis in full compliance with the National Environmental Policy Act. This means before on-the-ground activities are permitted, environmental assessments will be made. Where proposed activities individually or cumulatively, would have major effects on quality of the human environment, environmental impact statements will be prepared with full public involvement. Where environmental impacts are judged unacceptable, the proposed activities will be disapproved."

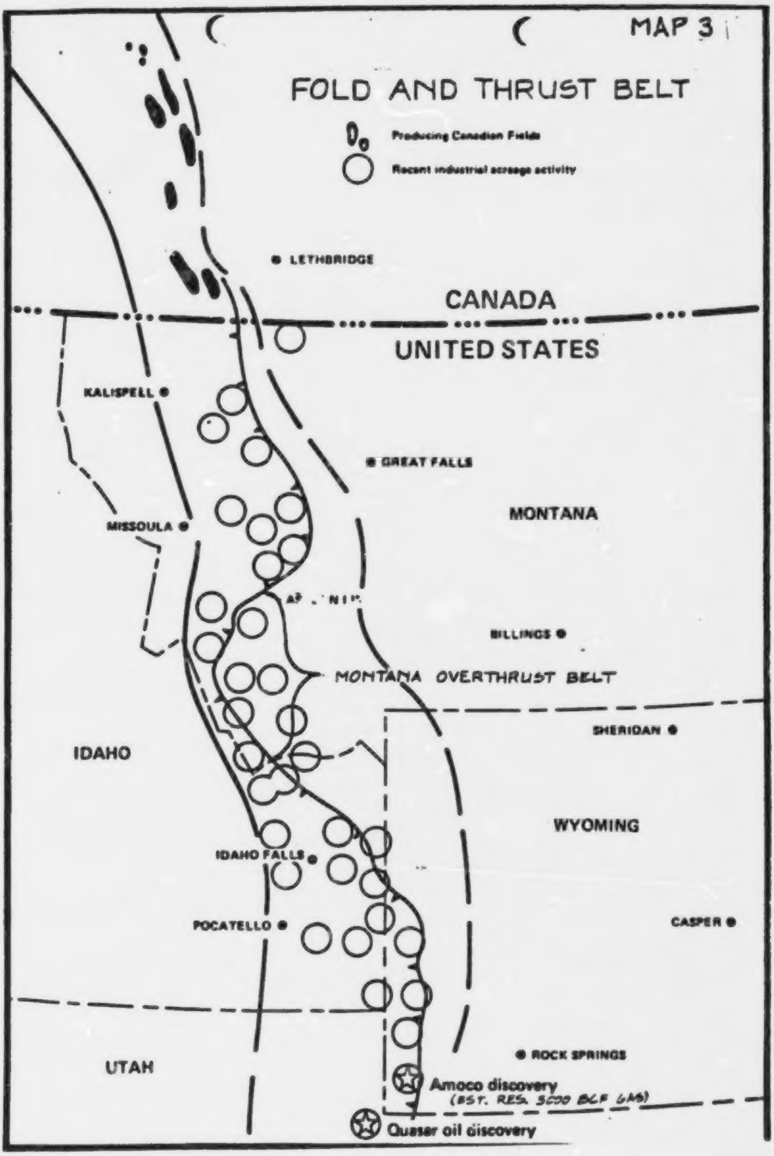
Decisions to recommend or deny leasing in areas recommended for further planning will be made by the Regional Forester based on this environmental assessment.

Activity on Other Lands

A review was made of oil and gas activity in land administered by the Bureau of Land Management, State of Montana, and privately owned lands. A major portion of all the land interspersed between the blocks of National Forest on the Beaverhead is under lease. Although several wells have been drilled on these other lands, none has resulted in a discovery. All of this activity is proceeding independently of actions taken by the Forest Service.

Why there is Interest in the Beaverhead Area

The Beaverhead National Forest lies within a geologic zone known as the Montana Overthrust Belt (see Map 3). This belt is a part of a larger geologic fold and thrust belt or province stretching from Canada to Mexico. Within this province sedimentary rocks are folded and faulted such that often older rocks have been thrust over younger rock formations. Petroleum geologists believe the province contains large amounts of deeply buried oil and gas.


MAP 3
FOLD AND THRUST BELT
Producing Canadian Fields
Recent industrial acreage activity
LETHBRIDGE
CANADA
UNITED STATES
KALISPELL
GREAT FALLS
MONTANA
MISSOULA
BILLINGS
MONTANA OVERTHRUST BELT
SHERIDAN
IDAHO
WYOMING
IDAHO FALLS
POCATELLO
CASPER
ROCK SPRINGS
UTAH
Amoco discovery
(EST. RES. 3000 BCF GAS)
Quasar oil discovery

Little exploration for oil or gas has been done in the Montana Overthrust Belt. However, a similar geologic province in Canada has major gas producing fields. Also, energy companies recently discovered oil and gas in southwestern Wyoming and northern Utah. These discoveries have caused much speculation on the potential of the Montana Overthrust Belt.

How Leases Are Made

Federal oil and gas leases are issued under authority of The Mineral Leasing Act of 1920 (41 Stat. 437 as amended; 30 U.S.C. 181) and The Mineral Leasing Act for Acquired Lands (61 Stat. 913; 30 U.S.C. 351-359). Rights granted include ". . . the exclusive right and privilege to drill for, mine, extract, remove, and dispose of all the oil and gas (except helium) deposits together with the right to conduct and maintain thereupon, all works, buildings, plants, pumping stations or other structures necessary to the full employment thereof, for a period of ten years, and so long thereafter as oil or gas is produced in paying quantities. . ."

All leases require rent payment in advance (one or two dollars/acre/year depending on type of lease[1/]). Lessees agree to pay royalties on any future production, the amount depending on the volume of oil or gas. Oil royalties are 12-1/2 percent for wells averaging up to 110 barrels per day and rise to 25 percent for wells producing 400 or more barrels. Gas royalties vary from 12-1/2 to 16-2/3 percent. Half of this lease income is returned to the host State, 10 percent goes to the U.S. Treasury, and 40 percent is deposited in the Federal Reclamation Fund. (Under Section 317 of the Federal Land Policy and Management Act of 1976, the State may spend its share for planning activities, the construction and maintenance of public facilities, or the provision of public services.) Prior to drilling, the applicant must secure a bond to insure compliance with all terms of the lease.

A lease on which there has been no discovery of oil or gas in paying quantities will expire at the end of the primary term for which the lease was issued (5 or 10 years depending on type of lease[1/]). A nonproducing lease automatically terminates at any time the lessee fails to make full and timely payments of the annual rental.

An owner of any lease issued under the authority of the Mineral Leasing Act may relinquish the lease in its entirety (or any legal subdivision of it) by filing a written notice to that effect in the proper Bureau of Land Management Office. A relinquishment takes effect the date it is filed, subject to the continued obligation of the lessee and his surety to pay all accrued rentals and royalties and to place all wells on the leasehold in proper condition for abandonment.

1/ Leases issued through competitive procedures are for 5 years and require rent payments of two dollars/acre/year. Leases issued through non-competitive procedures are for 10 years and require rental of one dollar/acre/year.

Leases may be cancelled administratively by the Department of Interior for failure of the lessee to comply with any provisions of the Mineral Leasing Act, the regulations issued under it, or the lease provisions if the land in the lease is not known to contain valuable deposits of oil or gas. Leases known to contain valuable deposits of oil or gas may be cancelled only by judicial proceedings.

General Agency Authorities and Responsibilities

The Bureau of Land Management (BLM), U.S. Geological Survey (GS), and U.S. Forest Service (FS) each play a specific role in regard to oil and gas leasing. The BLM has the primary responsibility for issuing and cancelling leases under the 1920 and 1947 leasing acts. The GS handles the technical administration of leases and permits within the area of operations. By interdepartmental agreement all applications to lease lands under Forest Service jurisdiction are referred to the Forest Service for review, recommendation, and special stipulations to protect the surface and surface functions.

Stipulations are conditions under which activity can take place on a lease. Some stipulations are standard, that is, they apply to any and all leases. These are provided by the BLM and are displayed in this report as appendices A and B. The Forest Service has found the need to request that the BLM employ the use of special stipulations on leases to be granted on the National Forest. Appendix C displays a preliminary draft of stipulations that will apply to leases issued on the Beaverhead National Forest.

It should be noted that since the BLM has the responsibility for issuing leases for oil and gas, the decision by the Forest Service resulting from this assessment is not final. The nature of the decision is rather that of recommending to the BLM. Historically BLM has honored Forest Service recommendations; but, if in the BLM's view the Forest Service has not recommended a course of action which is reasonable, responsive, and within the laws and established direction, the BLM has the discretionary authority to make decisions independent of Forest Service recommendations.

Whenever the lessee or operator of a federal oil and gas lease desires to drill on a leasehold, all proposed drilling operations and related surface disturbance activities must be approved before entry on to the lands involved. Approval by GS will be in accordance with (1) lease stipulations, (2) oil and gas operating regulations (Title 30 CFR, Part 221), and (3) notice to lessees number 6 (NTL-6) issued by the GS effective June 1, 1976 (see Appendix D). NTL-6 provides guidelines to the lessee or operator for planning lease development programs which insure that operations are conducted with due regard for the protection of the environment.

Agency roles in lease administration are shown in Figure 1.

Fig. 1.--Summary of Agencies' and operator's roles in lease administration 1/

OPERATOR'S ROLE	ROLE OF BUREAU OF LAND MGT. (BLM) U.S. GEOLOGICAL SURVEY (GS)	FOREST SERVICE (FS) ROLE	NOTES
Lessee contacts GS as to intention to enter leased lands, submits preliminary map and explanation of proposed activity	GS is in charge of ASU (area of surface use) operations	FS is notified of proposed entry on land - May ask for prestaking conference	15 day response time. Automatic approval if no FS response
Lessee submits Operating Plan and Application for Permit to Drill (APD) to GS	GS forwards Operating Plan/ APD to Forest Service (FS). Lead agency preparation of EIS if needed	District Ranger (DR) does environmental analysis on Operating Plan/ APD Using Forest Plan & Interdisciplinary team. DR/Forest Supervisor provides consent or recommendation to GS; conference with GS and Lessee as needed. (Possiblility of joint and/ or industry environmental analysis.)	FS policy is to consolidate everything in Operating Plan when possible rather than going through numerous Special Use Permits. Operating Plan may be supplemented or amended as needed.
	Approval of Operating Plan/ APD by GS		State and Federal air and water quality standards must be met in Plan
Bonding requirements are met	Bond is set by BLM		See Cooperative Agreement-GS/ FS for more information (FSM 1531.4)
Operator conducts drilling, transport, operating and required reclamation procedures	GS performs routine inspections within areas of surface use.	DR/Forest Supervisor performs routine inspections; FS can act directly in emergency situations to protect surface within or outside ASU, but routinely goes through GS	

1/ adapted from; Oil and Gas Guide, U.S.D.A., Forest Service, Northern Region, 1979.

OPERATOR'S ROLE	ROLE OF BUREAU OF LAND MGT. (BLM) U.S. GEOLOGICAL SURVEY (GS)	FOREST SERVICE (FS) ROLE	NOTES
Notice of Abandonment filed with GS by Lessee	GS sends copy to FS	Forest Supervisor/DR performs inspection and approves abandonment, release of bond. Regional Forester gives consent to GS on abandonment and bond release.	
	GS recommends release of bond to BLM BLM releases bund		

Activities on Leases

Once a lease has been issued several phases of activity may follow. The following discussion is a summary of Chapter III, Oil and Gas Guide, U.S.D.A. Forest Service, Northern Region, 1979.

Phase I: Preliminary Exploration (prospecting) - This includes seismic, gravity, magnetic, and remote sensing surveys to determine subsurface structure and aid in locating drill sites. Preliminary explorations goal is always to find where oil is likely to occur, how much is probably there and how deep it is; specifically, the goal is to detect probable traps, the quality and type of reservoir and source rocks, and the thickness and age of the sedimentary rocks in the area.

Where the bedrock geology of an area is well exposed, it is often possible to predict where oil might gather. The potential traps can sometimes be located with the aid of published geologic maps and aerial photos. Occasionally, additional data will be gathered by the use of aircraft to help identify rock outcrops that can be studied later on the ground by geologists. This type of exploration can usually be performed with little surface damage, requiring perhaps some off-road vehicle travel.

Subsurface geology is not always accurately indicated by surface outcroppings. In such cases, geophysical prospecting is used. Three subsurface characteristics are usually measured by geophysical methods: gravitational field, magnetic field, seismic characteristics.

Gravitational surveys and magnetic prospecting generally result in slight surface disturbance. Small trucks and jeeps with crews of several people are used in these two methods of subsurface data gathering, and off-road travel is likely.

Seismic surveys are the most popular of the geophysical methods and seem to give the most reliable results. A seismic survey is a method gathering subsurface geological information by recording impulses from an artificially generated shock wave.

Seismic methods are usually referred to by the various methods of generating the shock wave. The thumper method involves dropping a steel slab weighing three tons to the ground several times in succession along a predetermined line.

The vibrator method involves using a large truck equipped with a vibrator mounted between the front and back wheels. The vibrator pad is lowered to the ground and is triggered electronically from a recorder truck.

The dinoseis method can be used with a variety of vehicles. It's device consists of a bell-shaped chamber mounted underneath a vehicle. The seismic energy is imparted to the ground through the spark ignition of a propane oxygen mixture confined in the chamber. This method causes little surface damage.

Historically, subsurface and surface explosives have been the most widely used method to generate seismic shock waves. Subsurface detonation of a charge in some areas causes no surface disturbance, while in other areas a small crater up to six feet in diameter is created. The surface explosive charge method involves the placing of explosives directly on the ground, on snow, or on a variety of stakes and platforms. It results in good seismic data in some areas while creating little surface disturbance.

Low standard temporary roads and trails may be needed to use these survey methods.

Phase II: Exploratory drilling and associated road construction - There are basically two types of exploratory drilled holes: stratigraphic tests and wildcat tests. "Strat" tests involve drilling relatively shallow holes to supplement seismic data. Truck-mounted drilling equipment for strat tests is fairly mobile; therefore roads and trails to test sites on level solid ground are temporary, and involve minimal construction. In hilly or mountainous areas, more road building would be necessary.

If preliminary exploration or stratigraphic tests indicate the possible existence of oil or gas, a "wildcat well" will be drilled into the suspected trap to determine if oil and/or gas are present, and if it's quality and quantity is adequate for development. Wildcat well drilling involves constructing temporary roads on which to haul the drill rig and well service equipment, and for daily traffic to and from the drill site.

Phase III: Development - If oil or gas production appears promising, additional activities occur. Further drilling will be necessary to provide additional wells and to define oil or gas field boundaries. Roads, pipelines, storage tanks, and powerline construction may be necessary.

Phase IV: Production - This phase includes all actions associated with getting the oil and gas out of the ground and transporting it to a refinery or into a distribution system.

Production in an oil field begins soon after the discovery well is completed and often concurrently with the development operations. Temporary facilities may be used at first, but as development proceeds and reservoir limits are determined, permanent facilities are installed. The extent of such facilities is dictated by the number of producing wells, expected production, the chemical and physical nature of the oil and gas, the number of leases involved, and whether the field is to be developed on a unitized basis.1/

1/ Unitized - Unitization in its simplist form, means pooling of leaseholds and other rights within a given area and the sharing of the risks of exploration and development and the possible returns. One operator normally administers an entire unitized operation.

Phase V: Abandonment and reclamation - Once a well ceases production it must be plugged and the site rehabilitated. This phase also applies to all "dry holes". The average life of any given field is estimated from 15 to 25 years.

Abandonment of individual wells may start early in a fields' life and reach a maximum when the field is depleted. Well plugging and abandonment requirements vary with the rock formations, subsurface water, well site, and the well itself. In some cases, wells that formerly produced are plugged as soon as they are depleted. After plugging, the drilling rig is removed and the surface, including the water reservoir and mud pit, is restored to the requirements of the surface management agency. Usually a fence is erected to protect the site until the revegetation is complete, particularly in range areas if clover is part of the seed mixture.

About this Assessment

Relationship to land management planning -- The Beaverhead Land Management Plan allocates lands to certain uses or combination of uses. All lands have a single primary allocation (watershed, range, recreation, timber, wildlife, or wilderness). In addition, most lands also have one or more secondary allocations. For example, an area with a primary allocation to Timber Management may also have a secondary allocation to Wildlife Management.

In addition to allocations, the plan provides broad management guidance for specific parcels of land, but does not define when, where, and precisely how prescribed uses will be accommodated. This detail is to be provided by project plans. It is the intent of this environmental assessment to show how oil and gas leasing can take place within the context of the Beaverhead Land Management Plan. An alternative will not be developed which would be in direct conflict with land management plan direction.

Role of the Interdisciplinary Team -- The Forest Supervisor, Robert Williams assigned the task of preparing the environmental assessment to the Planning Branch of the Beaverhead National Forest. Interdisciplinary Team members were:

Frank Fowler, Planning Program Officer, Team Leader
Marvin Amundson, Planner
Roger Poff, Soil Scientist
Arnold Royce, Lands Specialist
Charles Sundstrom, Wildlife Biologist

Through interdisciplinary action, all or part of the team members participated in making recommendations on all major portions of the environmental assessment. At times it was necessary to consult with other specialists for needed information. Principal consultants were:

Norman Day, Geologist
Wallace Page, Hydrologist
Robert Wagenknecht, Landscape Architect
Terry Solberg, Minerals and Geology, Northern Region
Norman Yogerst, Soil Scientist, Northern Region
Lambert Wenner, Social Scientist, Northern Region

Issues and Concerns about oil and gas -- A review of past correspondence from the public led to the identification of issues and concerns. These were reviewed by personnel on the Beaverhead National Forest, and the Interdisciplinary Team compiled the following list as representing items for evaluation:

1. What effect will oil and gas activities have on:
    a. Habitat for endangered and threatened species?
    b. Habitat for big game animals?
    c. Archeological and historical resources?
    d. The visual resource of areas that now attract forest users?
    e. Water quality and water yield?
    f. Grazing permittees and the management of their allotments?
    g. Existing rights conferred through special-use permits, mining claims, rights-of-way, etc.?

2. What areas are unsuitable for oil and gas activities because of land instability or high erosion hazards?

3. How will oil and gas activities affect employment, established industry, the tax base, cost of public services, schools, and medical services?

4. What oil and gas activities may occur on areas being considered for wilderness?

5. What is the potential for oil and gas development in this area and how vital is it to the economic welfare of the United States?

The effects of oil and gas leasing on these issues and concerns are considered in this environmental assessment.

II. AFFECTED ENVIRONMENT

Threatened and Endangered Species

The Endangered Species Act of 1973 (16 USC 1531 note) is intended to prevent the further decline and to bring about the restoration of endangered and threatened species (wildlife, fish, and plants) and their habitats. The Act recognizes that destruction, modification, or curtailment of species habitat may endanger or threaten that species with extinction. The management of critical habitats provides an important means for protecting and restoring endangered and threatened species.

Actions which result in modification of critical habitat for the listed species common to the Beaverhead National Forest would violate the Act if (1) such actions might be expected to result in a reduction in numbers or distributuion of that species of sufficient magnitude to place the species in further jeopardy; or if (2) these actions restricted the potential and reasonable expansion or recovery of that species. The species on the Beaverhead National Forest to which the above statements apply are grizzly bear, grey wolf, bald eagle and peregrine falcon. Of these four species the gray wolf is the most widespread. In fact, on the Beaverhead there are few oil and gas lease applications that do not contain identified grey wolf habitat. See Appendix E.

Forest Service activities or programs will be evaluated to determine whether they will affect a threatened or endangered species or its habitat. If it is determined that an effect will or may occur, consultation with the U. S. Fish and Wildlife Service will be initiated. "Activities or programs" means all actions of any kind authorized, funded or carried out by the Forest Service, including those planned or implemented for the direct benefit of the species.

A review is the initial effort of a Federal agency to determine the nature and extent of the possible effects, if any, upon listed species. Such review must be competent, and must result in a decision that the action in question will affect, may affect, or will not affect a species or its habitat (see Appendix F).

Maps of the habitats for the threatened and endangered species are on file at the Beaverhead National Forest Office.

Wildlife

The Beaverhead National Forest provides habitat for 367 species of wildlife. These habitats have been identified according to the type of species that utilize them and according to the season of the year they are utilized by a given species. Utilization is defined as a habitat condition necessary to a species for feeding or reproduction. Since utilization information is readily available for each species, it can be used effectively to evaluate the impacts of actions affecting most wildlife species.

Because most oil and gas activites in any given lease area will be temporary and limited to small, widely-scattered localized areas, it is doubtful that most species would be significantly affected by any phase of oil and gas activity. That is, individuals would not be affected directly, but loss of habitat needed for their survival would eventually affect species density and distribution. If leases are issued, the following wildlife concerns should be considered at the time of lease because they are considered critical to wildlife needs.

1. Riparian zones contain a unique variety of both aquatic and terrestrial ecosystems. These ecosystems comprise important habitat for a large number of wildlife species. For this reason, road development and drilling activity within the zone would have a high probability of serious conflict.

2. Habitat requirements for big game extend over large areas of land. Some requirements appear more important than others (e.g., winter ranges, calving grounds, wallows, etc.), but none can be assumed unimportant to maintenance of the populations at the present level. In some areas the habitat needs are so sensitive that wildlife and oil and gas activity are incompatible. More often the situation might be resolved by timing oil and gas activity to avoid conflict during critical periods.

Other wildlife concerns are more easily identified and mitigated when the specific nature of the impacting activity is known and its location established. Consequently, a site-specific wildlife evaluation should precede any activity which involves drilling, road construction, or development. Such analyses will occur when the lessee or operator submits a proposal for road construction or drilling.

Cultural Values

The Forest and the adjacent land areas have an interesting history, including old mines, towns, and other historical landmarks.

Numerous remains of the early days are still in evidence throughout the Forest. Many old mine shafts, mills, and miners' cabins are still largely intact in the more mineralized portions of the Forest. Most historical features are located on patented mining claims and on private holdings within the Forest. Twenty-five archeological sites are recorded on the Forest. Other sites are known to artifact collectors, but these have not been recorded. Some sites may have been obliterated during private collecting and are lost to scientific investigations and evaluations.

Any surface-disturbing activity generated by oil and gas exploration or development has the potential for adversely impacting cultural resources, including archeological and historical sites.

During the preliminary exploration phase, the activity most likely to impact cultural resources adversely would be unrestricted off-road travel which might damage cultural resource sites and lead to increased illegal artifact collecting. Limitations on the type of ORV and the amount of ORV use permitted would tend to alleviate this impact.

Any ground-disturbing activity (construction, leveling, etc.) associated with the construction of drilling and transportation facilities (well pad, sludge pit, road, powerline, pipeline) for the exploratory drilling and development phases would have the potential for damaging cultural resource sites.

It is unlikely that impacts would occur to cultural resources during the production and abandonment phases since these involve pre-existing facilities. However, any additional construction associated with these phases that occurs outside previously inventoried areas (e.g., borrow pits for fill dirt for abandonment phase reclamation) would have the potential for impacting cultural resources.

The following procedures would help prevent loss of cultural values due to oil and gas activities. Prior to initiating construction on National Forest land, inventory the affected area must be inventoried for cultural resources pursuant to the requirements set forth in Executive Order 11593. This inventory must be performed by a qualified cultural resource specialist holding a valid antiquities permit issued by the Department of Agriculture through the Regional Forester (see FSM 2700).

If sites are located within areas of planned activity and evaluated as qualifying for the National Register of Historic Places, such sites must be nominated to, formally determined eligible for, the National Register (pursuant to Executive Order 11593 and 36 CFR 63) and the effect of the undertaking determined pursuant to Section 106 of the National Historic Preservation Act of 1966.

Visual Resource

With over 600,000 acres either under oil and gas lease or with applications for lease, the area that could be visually impacted is large and diverse. However, only a small percentage of the leases are likely to be developed, and an even smaller percentage would have the potential for adverse visual impacts. The great diversity of the area, coupled with the uncertainty of development, makes it necessary to address the possible affects in general terms.

Landscapes which present broad vistas over uniform, low vegetation on gentle topography are most easily visually impacted. Such areas include high, broad ridgetops at or near timberline; broad sage-covered ridges and basins; and low elevation stream bottoms. Because these areas lack much screening capability (either topographic or vegetative) mitigative measures may be necessary to minimize the visual impacts of access roads, drill pads, structures, and equipment. Recently maps have been prepared which stratify the sensitivity of the view from various facilities (i.e., roads, trails, lakes, campgrounds and communities) into three levels. While these have not been formally adopted as guidance for the Beaverhead Forest, they could be used to obtain an indication of the impact of oil and gas leasing by overlaying the sensitivity maps on an application area. Any area within three miles of a facility identified as "Level 1" (most sensitive) and within one mile of a facility identified as "Level 2" (moderately sensitive) could be considered to have potential for adverse visual impacts.

It is obvious that the area of potential impact could be significantly reduced with field checking (topography and vegetation will screen portions of the lease area). This could be done as a part of the environmental analysis made when, and if, the lessee requests permission for road construction or drilling.

Water

Water quality on the Beaverhead National Forest is generally high. The principal potential effects of oil and gas activity on water quality are increases in sedimentation, surface water contamination, and ground water contamination.

Sedimentation is identified in terms of increased total sediment yield, usually measurable at some point within established drainageways. Increases in sedimentation occur during preliminary exploration when equipment disturbs soils that have potential to be washed into stream channels. Exploratory drilling and development phases often require roads and drill pads that are completely stripped of vegetation, exposing mineral subsoil. The potential for erosion on these areas may be significant. Pipeline crossings of established waterways are especially susceptible to sedimentation, particularly where they are buried beneath the stream channels. Contamination prevention measures are required by the U. S. Geological Survey in all aspects of their administration of the drilling and production operations. However, a remote possibility of accidental contamination could occur from certain operations. Surface water contamination could result where mineralized water or oily residue resulting from drilling or production operation enters streams or wetlands. Oil spills are the most common cause of surface water contamination. Leakage at the face of reservoir and mudpits, which are required to hold waste and drilling mud during the drilling operation, could cause contamination during the drilling operation, if improperly designed or constructed. Leakage from evaporation pits and oil spills could also occur during the production operations. Evaporation pits are required to hold produced water that is removed from the oil when it is extracted from the ground.

Oil spills constitute the most serious hazard for surface water contamination and could occur when petroleum is in transit but may also occur as blowouts during exploratory drilling and development phases. Both the Geological Survey and the Environmental Protection Agency have authority to prescribe spill prevention measures and oil spill countermeasures.

Ground water contamination may occur during drilling operations from surface leaching of contaminated liquids, or the introduction of well fluids into the deep ground-water aquifers. The Geological Survey requires certain procedures in all drilling and production operations to prevent ground water contamination. However, there is always a remote chance that contamination from surface sources may occur from leakage or failure of mudpits and evaporation pits. Mudpit fluids or produced waters that infiltrate into the ground will eventually mix with the ground waters. Consequently, the ground water may accumulate certain soluble minerals contained in the leach water. Deep ground water contamination may occur by the mixing of interformation waters where ground water levels are separated by impermeable geologic formations or strata. A formation containing "fresh" water, for example, may occur above or below a formation containing "briny" water or salt water. Regulations designed to prevent interformation contamination include cementing the surface casing and cementing the production casing above and below the producing zone. In special circumstances, oil companies are also required to cement and/or set casing through other formations. This would be the case in particularly high water yielding formations.

In addition to regulation and requirements of the U. S. Geological Survey and other regulatory agencies concerned with drilling and production activities, there are many mitigating measures that could be employed to minimize the potential to degrade the water quality resulting from other phases of the oil and gas operation. Most of these measures, however, apply to specific activities and can be specified when the lessee requests permission to build a road or do other disturbance type activities. Examples of mitigating measures are:

1. Minimizing or prohibiting surface disturbance or removal of the protective vegetation mat in areas where surface runoff may enter stream channels. This could prevent surface occupancy or use of some sites.

2. Minimizing crossing of all streams.

3. Locating roads, pipelines, and drill sites well away from water sources, including wells, springs, ponds, etc., and sealing of the pit bottom by various methods.

Grazing

The area covered by oil and gas applications is about 53% grazing lands. Included are 94 cattle and sheep allotments. Beaverhead National Forest lands provide important forage for grazing animals; 28%, or about 603,000 acres, of the Forest is used for livestock grazing. Effects on range ecosystems and their uses from oil and gas activity would vary considerably. Some activities will have a common effect on all range and range uses. Others may affect only certain uses, and possibly only during certain periods of the year. Disturbances such as construction of roads, pipelines, drillsites, production facilities, and the additional people employed during the exploratory drilling and development phases will have a negative impact on range ecosystems. Additional roads may facilitate the rancher's supervision of his livestock operation but can have negative effects on the domestic and wildlife uses of the rangeland environment. A significant problem during these phases would be the increased vehicular traffic. Range fences will be barriers to exploration activities. Gates left open and damaged fences may result in loss of livestock control. Buried range improvements such as waterlines could be damaged during phases of oil and gas activity where earthwork occurs. There is also the remote possibility that accidental leaks or failure of mudpits and evaporation pits may contaminate ponds or watering areas where drill pads must be located near these improvements.

Most of the conflicts associated with grazing can be prevented by incorporating conditions in the leases that will protect or avoid these resource values during oil and gas operations. Concerns of a site-specific nature will be evaluated when and if the lessee requests permission to construct roads or drill.

Existing Rights

There are many "rights" which have been conferred to individuals through the permit system (e.g., grazing, firewood gathering, etc.), special use system (e.g., resort areas, water developments, hunter and guide permits, etc.), road rights-of-way, mining claims, etc.

Oil and gas leasing would not preclude these existing rights. There would be situations where established use would be affected, but the rights that may be conferred for oil and gas development would not supersede them. Since the oil and gas resource is deep beneath the ground surface, and the resource itself is not in competition with other uses of the land, the potential conflict would primarily center on access roads and drill site development. An environmental analysis will be required of those activities when a plan of operation is known and specific sites can be identified as to location.

Soil Resource

Activities associated with oil and gas exploration and development can alter soil properties. Severe soil compaction can cause long-term or permanent changes. Compaction reduces productivity by restricting root development and accelerates runoff and erosion by reducing infiltration. Erosion of topsoil caused by loss of vegetative cover also reduces productivity. Road construction and other earth-moving activities increase sediment loads in streams when they cause soil mantle failures and expose subsoils to erosion. Seismic work and off-road vehicle travel have the greatest potential to cause soil compaction. Road construction, drilling, and development activities have the greatest potential to cause soil mantle failures and erosion.

The Beaverhead National Forest contains a wide variety of soil and geologic types. The areas currently being considered for leasing generally occur on landforms and soils more susceptible to erosion and soil mantle failure than the rest of the Forest. Some stipulations to protect the soil resource can be specified when leases are granted, and the relative proportion of the lease covered by the stipulation can be estimated. However, these are only general guidelines. Additional, more specific recommendations can be made when specific locations and types of activities are known and an on-site investigation has been made.

Soil characteristics that affect soil stability vary considerably over short distances, and activities associated with oil and gas exploration and development are diverse. Most areas where the risk of soil mantle failure is high are site-specific and can be avoided by careful location of roads or sites chosen for development or drilling. Most other impacts on the soil resource can be mitigated by application of the standard stipulations and by good project design.

Surface erosion can be minimized by: (1) avoiding steep slopes, (2) controlling off-road vehicle travel, (3) adequately draining and stabilizing roads, (4) building no more road than necessary, (5) immediate rehabilitation of disturbed sites, and (6) stockpiling topsoil for use in rehabilitation. Compaction can be minimized by specification of type of equipment (seismic and ATV) and season or conditions of use on highly susceptible soils. Soil mantle failure can be minimized by avoiding highly unstable areas and steep slopes, and by drainage and stabilization of unstable cut and fill slopes.

Socioeconomic

Affected Area The social and economic environment affected by oil and gas leasing is much broader than the affected environments for individual resources. Activities associated with oil and gas development affect physical and biological resources on only a few acres within a lease, but development of any lease within the affected area creates far-reaching social and economic impacts. Also, the probability of development on a given lease is low and site-specific, while the probability of development somewhere in the affected area is much higher.

The affected social and economic environment for purposes of this Environmental Assessment is all of southwest Montana, including the communities of Dillon, Sheridan, Ennis, Lima, and other smaller rural communites. Since most of the affected area is in Beaverhead and Madison counties, and since data are available for these two counties, the following description of the social and economic environment for these two counties will serve as a profile for the affected area.

In 1970, the combined population of the counties was 13,201, increasing 4.2% from 1950 to 1970 (Table [illegible]). During this same period there was a decrease in rural population and a decline in the 20 to 24 age group. The projected 1980 population for the two counties is 14,305, an 8.4 percent increase from 1970. The median age in Madison County is much higher than that of Montana or the nation, but it is about average in Beaverhead County.

TABLE 1: Past and Projected Populations in the Counties with Oil and Gas Lease Applications

	U.S. CENSUS DATA			MONTANA PROJECTIONS		
County, Cities:	1950	1960	1970	1980	1990	2000
Beaverhead	6,671	7,194	8,187	8,703	9,375	10,251
Dillon	3,268	3,690	4,548	4,870	5,246	5,736
Lima	483	397	351	382	411	450
Madison	5,998	5,211	5,014	5,602	5,455	5,433
Ennis	uninc.	525	501	674	656	654
Sheridan	572	539	636	727	708	705
Twin Bridges	497	509	613	569	554	551
Virginia City	323	194	149	174	169	169
Montana (thousands)	591	675	694	786	918	1,068
U.S.A. (millions)	151	179	203	225	257	287

Sources: U.S. Census, 1970; Population Projections, Montana Department of Community Affairs, August 1977.

Economic Characteristics The area is primarily dependent on agriculture, with significant contributions to earnings and employment also made by various levels of government (Table 2). The cool climate and poorly developed transportation network have not encouraged the location of people or industry, but the expectation is for continuing growth.

Table 2: Distribution of Employment in Beaverhead and Madison Counties, by Occupational Category

Agriculture	31%	Construction	7%
Government	20	Manufacturing	4
Wholesale and retail trade	18	Mining	2
Professional and related fields	17		

Unemployment levels in both counties are currently well below State and Federal averages, but remain at higher levels in the adjoining counties of Deerlodge (Anaconda) and Silver Bow (Butte). Table 3.

Table 3: Unemployment Trends in Southwest Montana, by County

County:	1972	1974	1976	1978	March 1979
Beaverhead	4.4	4.9	4.6	3.9	3.8
Deerlodge	5.5	5.3	8.6	8.4	6.3
Gallatin	3.8	5.6	6.6	4.2	3.7
Madison	6.1	6.7	7.8	3.9	3.5
Silver Bow	5.9	6.7	11.9	8.4	6.2
Montana	4.8	5.2	6.4	6.0	5.4
U.S. Rates	5.6	5.6	7.7	6.0	

Source: Montana Department of Labor and Industry, Montana Employment and Labor Force, April, 1979.

Social Characteristics People in low income groups (below poverty level) number 20-25 percent higher than state and national averages, and incomes are less equally distributed than for the rest of Montana. This may imply a greater desire for development than in other places, since development is associated with economic gains. On the other hand, many local residents seem willing to pay an "opportunity cost" (their lower income levels) for the amenities the area offers. Some have come to escape the rapid pace of development and growth in other areas and may feel industrial development is a threat to their lifestyle.

The area appears to contain a potential for conflict in terms of development vs. preservation, especially in Beaverhead County where change is more of a threat to existing lifestyles. However, residents of the Madison Valley are generally more receptive to a wide variety of changes as long as change can be seen as enhancing economic stability.

References:

Socio-Economic Overview--Beaverhead National Forest. USDA-FS, January 1974. Publication No. R1-74-005.

Wenner, Lambert, 1979. Social Impact Assessment: Proposed Oil and Gas Leasing in Beaverhead National Forest, rough draft of background document. U.S. Forest Service, Minerals Impact Evaluation Group, Northern Region, January 24, 1979.

III. EVALUATION CRITERIA

The following criteria were identified by the interdisciplinary team to evaluate the alternatives (section VI) and identify a preferred alternative.

1. Forest Service Policy for leasable minerals — The Forest Service policy is stated in the Forest Service Manual, 2822.03 which states; "The Forest Service considers mineral exploration and development to be important parts of its management program. It cooperates with the Department of the Interior in administering lawful exploration and development of leasable minerals. While the Forest Service is mainly involved with surface-resource management and protection, it recognizes that mineral exploration and development are generally in the public interest and can be compatible with the use and protection of surface resources in the long term."

2. National energy needs -- Our Nation currently imports over 50 percent of its oil. This fact has contributed significantly to our imbalance of payments and resulting instability of the dollar abroad. Development of hydrocarbon reserves on Federal land is one way to slow the erosion of our currency abroad and to help reduce the related consequences.

3. Protection of resource values and uses -- The resource values and uses listed below were identified by the public or members of the interdisciplinary team as significant concerns in evaluating oil and gas leasing. Applying these criteria should be done with recognition of the ability to mitigate conflict.

    a. Land stability -- Soil stability is maintained and stream sedimentation avoided.

    b. Water quality -- Streams and other bodies of water are maintained free from toxic materials extracted from beneath the earth's surface.

    c. Visual resource -- The visually sensitive landscapes are retained with only short-term (one to two years) conflicts.

    d. Wildlife habitat -- Animals are not harassed or displaced in significant numbers for extended periods of time, particularly on key habitats.

    e. Threatened and endangered species -- Habitat for threatened and endangered species is protected.

    f. Existing leases and permits -- Existing leases and permits continue unencumbered by oil and gas activity.

4. Social and economic concerns -- The following criteria identify conditions that could occur as a result of oil and gas leasing. Application of these criteria should consider short-term effects resulting from preliminary exploration activities, and the longer-term impacts for the following activities based on probability of occurrence on a particular lease block (from Socio-economic Assessment Guidelines for Oil and Gas Activities, tech-draft, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979, p. 42.)

Activity	Probability of Occurring
preliminary exploration	1:1
exploration drilling	1:2
discovery	1:10
small field development & production (10 wells)	1:70
medium field development & production (50 wells)	1:150 to 1:300
large field development (100 wells)	1:1000 to 1:1700

a. Maintaining community traditions and interpersonal relationships - Rapid in-migration can disrupt established community traditions and interpersonal relationships. The severity of effects depends on the speed and duration of the increase and the degree to which newcomers are culturally different from old-timers.

b. Maintaining adequate social services and facilities - Population growth associated with mineral development can exceed an area's capacity to provide adequate public and private facilities and services depending on growth rate, the extent of advance planning, and the adequacy of these facilities before development.

c. Increasing employment and business activity - Oil and gas development beyond the preliminary exploration stage and any related construction activity normally generates some local employment and increases the volume of local business activity.

d. Adequate supplementary revenue to support short-term growth - Mineral development has the potential to develop additional revenues to offset increased public expenditures for facilities and services, but there is often a 2-5 year time lag during which supplementary income sources are needed to support this development.

e. Capacity to adjust to higher taxes, rentals and prices - Local people tend to benefit unequally from mineral development. Some are enriched, while others are disadvantaged by rising rentals, taxes, and prices. A portion will change occupations in an effort to improve their circumstances.

IV. ALTERNATIVES CONSIDERED

The reasonable range of alternatives identified in this environmental assessment were developed by the interdisciplinary team to provide a basis for identifying and choosing an action plan relative to oil and gas leasing. All alternatives identified were developed with a consideration of the following criteria.

1. The Forest Service direction for complying with the National Environmental Policy Act states that "the alternative of taking no action (continuing the present course of action or no change) must always be considered."
2. Alternatives must be feasible in the sense that they would be compatible with existing laws, Executive Orders, regulations and judicial direction.
3. Alternatives must not be conflicting with direction provided in the Beaverhead Land Management Plan.
4. Alternatives must honor existing leases.
5. Alternatives must be reasonable.
6. Development of alternatives should be responsive to the issues and concerns identified and the evaluation criteria established.

The following three alternatives were judged by the interdisciplinary team to meet these criteria, and are considered viable alternatives in this assessment.

Alternative A - Continue present course of action

The present procedure for processing applications would continue in all areas except those recommended for further planning in RARE II (see Oil and Gas EAR, dated August 15, 1977). Leases would be granted (outside of further planning areas) with a "no surface occupancy" stipulation provided (1) the action would be compatible with the land management plan and (2) the lessee would be willing to accept the "no surface occupancy" stipulation. Leasing procedures for areas recommended for further planning would be responsive to RARE II F.E.S. (see Page 97).

Alternative B - Defer leasing pending completion of Forest planning under NFMA

All lease applications outside of further planning areas would be deferred pending completion of Forest planning required by the National Forest Management Act (NFMA). The NFMA planning process would result in a Forest land management plan which would meet specified standards. Standards for oil and gas leasing would be part of that process. The Beaverhead has been directed to begin this planning process by October 1980. Completion would be expected in 1983. Those leases already granted would be honored. Leasing procedures for areas recommended for further planning would be responsive to RARE II F.E.S. (see Page 97).

Alternative C - Lease with surface occupancy

Leases would be granted with stipulations for surface protection. Applications would be evaluated against the Beaverhead Land Management Plan and against resource concerns identified in this environmental assessment. Appropriate stipulations, including no surface occupancy in some instances, would be applied to restrict oil and gas activities on portions or all of a given lease. Leasing procedures for areas recommended for further planning would be responsive to RARE II F.E.S. (see Page 97).

Other alternatives were identified by the interdisciplinary team, but were dropped from further consideration because they were conflicting with the alternative formulation criteria.

> One such alternative would have placed areas recommended for further planning in a deferred status. This would have conflicted with the direction in the RARE II Final Environmental Statement.
>
> Another would have provided an opportunity to lease in certain geographic areas on the Beaverhead National Forest and to defer leasing on others. This would have been done with the assumption that "too much" leasing would be undesirable. The interdisciplinary team was not able to identify reasons for selecting some areas for lease and some areas for deferral, and concluded that this alternative would simply reflect that oil and gas activity must be arbitrarily suppressed.
>
> Another would have denied all lease applications. Since there is established policy to provide for leasing in wilderness areas, wilderness study areas, Further Planning areas, it did not appear reasonable to do less in other areas.
>
> The last example of an alternative identified, but discarded, was one which would have been more liberal in granting surface occupancy rights (than any of those selected for evaluation). A more liberal approach would have been conflicting with the direction in the Beaverhead Land Management Plan. Consequently, the alternative was not judged reasonable.

V. EFFECTS OF IMPLEMENTATION

Effects of implementing each alternative are expressed below in terms of differences from the present condition and the expected future condition for each alternative. Discussion identifies long- and short-term changes that would reasonably be expected to occur as a result of leasing and associated oil and gas activities. The assumption is made that some profitable oil or gas discoveries will occur under alternatives B and C.

1. Extent of Development

Alternative A - Very little development would occur since leases would be granted under the direction provided in the Oil and Gas E.A.R. dated August 15, 1977. Under this direction, leases would be granted with a "no-occupancy stipulation" if requested by the lessee and if compatible with the Land Management Plan.

Alternative B - Very little development would occur prior to completion of Forest planning in 1983 since very little activity would be allowed on existing "no-surface-occupancy" leases. In the long run, there could be increased development due to change in management direction brought through the process of bringing the Forest Land Management Plan into compliance with NFMA.

Alternative C - The potential for development would be greatest under this alternative. Although no-surface-occupancy restrictions would apply to some leases, many leases would be granted with a right to develop contingent upon certain surface use and protection stipulations. The probability of incurring preliminary exploration impacts on any surface occupancy lease is 1:1; the probability of incurring drilling impacts is 1:2; and the probability of incurring any field development on a given block is 1:70 (from Socio-economic Assessment Guidelines for Oil and Gas Activities, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979).

2. Environmental Change

Alternative A - Disturbance would be minimal since only work associated with preliminary exploration would occur. The disturbance that would occur would be unnoticeable in a short time (1 to 3 years).

Alternative B - Same as Alternative A until land management planning (NFMA).

Alternative C - The potential for change would be the greatest under this alternative. Leases that show enough promise to warrant road development and drilling would incur surface impacts which would affect such values as wildlife habitat, visual resource, and water quality. Mitigating measures would be needed to protect these values. Except in the instances where oil or gas are discovered, the effects would not be long lasting (1 to 3 years). Where oil and gas are discovered, effects would be confined to the access road and well site, but they would be long lasting (15 to 25 years or more).

3. Outputs of Goods and Services

Alternative A - Present output of goods and services from National Forest would not be affected. An additional revenue on lease rentals could be obtained from additional leases that would be issued. However, because production would not occur under no occupancy restrictions, there would be no revenues from oil and gas production. This alternative would not result in any energy outputs.

Alternative B - Present output of goods and services from National Forest would not be affected. Rental revenues from leases would not change until completion of NFMA planning in 1983. In the long-term rental and royalty revenues could increase pending outcome of Forest planning. Energy outputs would not occur until completion of Forest planning in 1983. In the long term the energy outputs would depend on the outcome of NFMA Forest planning.

Alternative C - Present output of goods and services from the National Forest, under the existing Land Management Plan, would not be appreciably affected. Lease rental revenue would increase as more area is put under lease. If drilling resulted in oil or gas discoveries, revenues from production (royalties) would be realized based on the volume of production. This alternative could contribute one-thousand billion B.T.U.'s or more energy depending on the extent of discovery.

4. Cost of Administering Oil and Gas Program

Alternative A - Forest Service and BLM expenses would be primarily that of processing lease applications. Since all leases would involve no-surface-occupancy, very little additional cost would be incurred by FS in field checking and administration of oil and gas activities. GS would not incur administration costs.

Alternative B - Expenses would be minimal until completion of Forest planning in 1983. Pending outcome of NFMA planning effort, FS and BLM could incur short-term expenses in issuing leases; and FS and GS could incur longer term expenses in administering oil and gas operations on leases with surface occupancy rights.

Alternative C - FS and BLM would incur expenses in processing the 348 applications now on file and any future applications. Because many applications would result in leases with the right to surface occupancy, FS would incur substantial cost for field checking and on-the-ground administration of preliminary exploration activities. If leases showed promise of discovery, additional expenses would be incurred by FS and GS in environmental assessments of roading, drilling, developing, etc. GS would incur substantial expense in administration of lease operations if preliminary exploration and exploratory drilling resulted in profitable oil and gas discoveries.

5. Economic Effects

Alternative A - Any large increase in geophysical exploration could generate a few local jobs and some local businesses would experience increased sales during this activity. Favorable exploration results could lead to increased leasing and greater rental income. There would be no benefits from revenue on oil and gas production.

Alternative B - No significant changes are expected until completion of NFMA planning in 1983. The potential for longer-term effects would depend on management requirements set forth in the NFMA Forest Plan. There would be no short-term benefits from revenue on oil and gas production; long-term benefits would be identified in NFMA Forest Plan.

Alternative C - The economic impacts associated with the full sequence of oil and gas development are complex. In general, the effects of initial activity are small and temporary. Oil and gas development is not labor-intensive, and much of the initial work is done by transient workers. The multiplier effect is small and much of the payroll is spent outside the affected area. As development becomes more intense, the need for supportive and service-type workers increases. Since oil, gas, and related construction jobs generally pay more than other local jobs, development could lead to higher average incomes, more equality of income distribution, and considerable switching from lower to higher paying employment (Table 4).

Table 4: Average Hourly Earnings by Occupation Group, Montana 1978.

Contract construction	$11.48	Wholesale and retail trade	$4.92
Mining	8.93	Finance, insurance, and real estate	4.05
Manufacturing	7.81	Services	4.03
Transportation and public utilities	7.42	TOTAL (all employees)	5.92

Source: Montana Department of Labor and Industry, February 1979.

Other sources of local income normally generated by oil and gas development are: rental and royalty income, increased business for many local firms, eventual increases in tax revenues, and possible supplementary payments or grants from outside sources to offset the increased burden on local services and facilities. These are described in detail in *Socioeconomic Assessment Guidelines for Oil and Gas Activities*, tech. draft, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979, Chapter 5). This alternative could generate revenue from oil and gas production. The amount depends on the size of the discovery.

6. Social Effects

Alternative A - Possible increases in geophysical exploration could result in one or more crews of about 20 workers residing in the vicinity of certain lease blocks during the warmer season. Greater demand for lodging and other transient services and increased presence of newcomers could occur in affected communities.

Alternative B - No immediate changes are anticipated because no significant developments would occur for several years. The potential for longer term effects would depend on the management requirements set forth in the NFMA Forest Plan.

Alternative C - Resource impacts of oil and gas development are easily defined, very localized, and can generally be mitigated; social and economic impacts are closely related, difficult to define, can affect a very broad area, and are very difficult to deal with effectively, if at all. Some social and economic impacts will occur in the affected environment whether the FS grants leases or not. Granting of leases on FS lands will only increase the probability of development to some degree. Some leasing has already occurred outside the National Forest boundary and drilling has been under way for several years. Small communities in the affected area have already felt the impacts of the initial phases of oil and gas development to some degree.

In the great majority of instances oil and gas activity will be small-scale and limited to a portion of the leaseholds. Given the great number of leases on the Beaverhead Forest, a significant discovery somewhere is a distinct possibility and would bring dozens to hundreds of people into a rural area with a limited capacity to host them. Considerable change would result.

Feelings about change are highly individual and, therefore, difficult to categorize. People have a tremendous capacity to adapt to change, and with training and experience can adapt to many new situations. However, there is a physical and mental limit to this capacity, and change can be so rapid as to exceed individual and collective abilities to adapt. It takes time to change attitudes, redefine priorities, and accept new values and lifestyles. In general, changes inconsistent with prevailing patterns that are introduced by "outsiders" (such as oil and gas development) are the most difficult to accept or mitigate.

Rapid growth and development can seriously affect lifestyles, outlooks, and the quality of social relationships. Communities with populations of more than 10,000 can usually absorb impacts readily; communities smaller than 2,000 rarely can. While Dillon is on the borderline, the other communities in the affected area are not large enough to adapt easily to the change in growth associated with oil and gas development.

Very rapid growth generally causes the following changes in the social environment. The first effect is a losss of stability in housing, zoning, and community services. Even a modest influx of people in a sparsely populated area can dramatically increase rents. (To some extent, even the initial exploration and drilling activities have caused this to happen in Dillon.) Real estate development becomes speculative and uncoordinated, public services (school, police, etc.) become overloaded and increased competition for goods and services often resulting in hardship for people on fixed incomes. The tax base rapidly becomes inadequate or adjustments are too tardy to deal with increased demands for public services. Local governments lacking in experience or authority are usually unable to deal with large-scale problems. At the same time, the weakening of informal controls creates the need for greater police and court control. Controlling the impacts of oil and gas development can itself create additional burdens.

A big factor in predicting the impacts of oil and gas development is the fear of unknown, which fosters uncertainty and speculation. Also, those not in favor of oil and gas development may be reacting to what they have learned to expect from experiences in other areas that have gone through the rapid changes that accompany oil and gas development. Social affects are discussed in more detail in Socioeconomic Assessment Guidelines for Oil and Gas Activities, Technical Draft, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979.

VI. EVALUATION OF ALTERNATIVES

The evaluation criteria (see Section III) were grouped into four general categories by the ID Team for choosing an alternative course of action: Forest Service policy for leaseable minerals, national energy needs, protection of resource values and uses, and social and economic concerns. The ID Team felt that each of the four categories were equal in importance. Consequently, the evaluation that follows is presented with discussion directed to each of these four categories.

1. Forest Service Policy

Alternative A would continue the present procedure for processing applications and leases would be granted with a "no-surface occupancy" stipulation. Under this alternative preliminary exploration would occur but since very little development would occur and since production would not occur under "no-surface occupancy" restrictions this alternative is not fully responsive to Forest Service policy which recognizes that oil and gas exploration and development are generally in the public interest and can be compatible with the use and protection of surface resources in the long-term.

Alternative B would defer all lease applications pending completion of the Forest planning required by the National Forest Management Act (NFMA); however, leases already granted would be honored. This alternative is similar to alternative "A", except that it could consider oil and gas exploration, development and production to be important aspects of the forest management program when the Forest Land Management Plan is brought into compliance with NFMA.

Under Alternative C leases would be granted with stipulations for surface protection. This alternative would consider oil and gas exploration, development and production to be important aspects of Forest management program, generally in the public interest, and compatible with the use and protection of surface resouces in the long-term.

2. National Energy Needs

Alternative A would not contribute to meeting the national energy needs because production would not occur under "no-surface occupancy" restrictions.

Alternative B would not contribute to meeting the national energy needs until completion of Forest planning in 1983. After that date, oil and gas could be administered as a commodity resource to the extent that it is compatible with the NFMA land management direction.

Implementation of Alternative C could contribute to meeting the energy need beginning this year. Hydrocarbon reserves could be established in 3 to 5 years; field development and consequent production of oil and gas could occur in 3 to 10 years where oil and gas is found in quantities sufficient to promote development.

3. Protection of Resource Values and Uses

Alternative A: Since exploratory drilling and development would not occur outside further planning areas because of "no-surface occupancy" restrictions, the potential for affecting any resource value or use would be low. Short-term impacts could occur from preliminary exploration activities whether leases are issued or not. Wildlife could be harassed or displaced where seizmic exploration activities are extensive and for significant periods; permittees and Forest users could be inconvenienced for short periods due to seizmic activities.

Impacts resulting from implementation of Alternative B would be similar to alternative "A" prior to completion of Forest planning in 1983. Resource impacts due to exploratory drilling, development and production activities that may ensue following the implementation of the NFMA Forest plan would be addressed in the NFMA Forest Plan.

Implementation of Alternative C, which would result in issuance of more leases, would result in more cumulative preliminary exploration activities on National Forest land and could result in some exploratory drilling in the near future. Effects from preliminary exploration would be similar to alternative "A", but an increase in activity would require additional Forest Service supervision to insure that resource values and uses are protected. Drilling and associated road construction activities would produce essentially permanent changes in the landscape in some area. In the event of profitable oil and gas discoveries developments such as pipelines, tank batteries, service roads and utilities would be needed to extract and transport petroleum. The potential for affecting any of the identified resources and uses would be great under these circumstances. Considerable effort would be involved on part of the Forest Service to work with the Geological Survey to mitigate environmental effects resulting from these activities. In some instances full mitigation may not be accomplished. For instance, some sedimentation may occur where developments must be located near streams. It may not be possible to fully mitigate visual impacts where terrain is unforested and smooth. Wildlife may be forced to leave some areas during periods of human activity.

4. Social and Economic Concerns

Social and economic effects under Alternative A would result primarily from preliminary exploration activities. Impacts would be minor for all criteria identified. The most noteable effect will be increases in employment and business during the field season. Considering the cumulative effects from activities on other ownerships, impact attributed to activities on National Forest land may be minor. The duration of any social and economic impacts would depend on the extent of oil and gas discovery on lands adjacent to National Forest land. Substantial discovery adjacent to National Forest land would spur preliminary exploration activity on National Forest lands to gather geologic data to locate potential oil and gas sources, and to determine size of the field discoveries.

Impacts resulting from implementation of Alternative B would be similar to alternative "A" prior to completion of Forest planning in 1983. Social and economic impacts due to exploratory drilling, development and production activities that may ensue following implementation of the NFMA Forest plan would be addressed in the Forest plan.

Implementation of Alternative C, which would result in the issuance of more leases, would result in more cumulative preliminary exploration activities on National Forest land, and could result in some exploratory drilling in the near future. The discovery of oil or gas could result in additional oil and gas activity. The extent of social and economic impacts resulting from such activity would depend largely on the size and extent of discoveries made and the discovery locations. The following matrix depicts our estimate of how identified evaluation criteria would be affected by certain aspects of oil and gas activity. The ratings (0-2) were assigned from information in Socioeconomic Assessment Guidelines for Oil and Gas Activities, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979. See especially Tables 11, 12, 14, 15 and 17.

		Affected Population														
	Probability of occurrence on any given lease.	Small, e.g., one or more rural communities. Evaluation Criteria 1/					Intermediate, e.g., Dillon or affected communities. Evaluation Criteria 1/					Large, e.g., Montana, or Northern Region. Evaluation Criteria 1/				
Activity		a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Preliminary Exploration	1:1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0
Exploratory Drilling	1:2	1	2	2	0	2	0	1	1	0	1	0	0	0	0	0
Small Field Development and production (10 wells)	1:70	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0
Medium Field Development and production (50 wells)	1:150 to 1:300	2	2	2	2	2	1	2	1	1	1	0	0	1	1	0
Large Field Development and production (100 wells) or a combination of many smaller fields in the vicinity.	1:1000 to 1:1700	2	2	2	2	2	1	2	2	2	2	0	1	1	1	1

Definitions

0 - Minor effects -- problems or effects normally adequately managed by existing institutions.
1 - Significant effects for some sectors -- new programs, special efforts needed to mitigate any negative effects.
2 - Severe effects -- effects or problems cannot be fully mitigated due to insufficient time and/or resources; general decline in quality of life.

NOTE: Despite individual differences both "positive" and "negative" effects will be evident to most observers. Of course, only a portion of the total socioeconomic effect can be attributed to oil and gas activity on National Forest lands.

1/ The letters "a", "b", "c", "d", and "e" at the head of the columns represent the evaluation criteria for Social and Economic Concerns, Section III of this report. "a" = Maintain community traditions and interpersonal relationships; "b" = Maintain adequate social services and facilities; "c" = Increasing employment and business activity; "d" = Adequate supplementary revenues to support short-term growth; and "e" = Capacity to adjust to higher taxes, rentals and prices.

Summary of Evaluation of Alternatives

The following chart is intended to show the relative degree to which the various alternatives respond to the evaluation criteria.

Evaluation Criteria	ALTERNATIVE		
	A	B[1/]	C
1. Forest Service Policy	□	░	▨
2. National Energy Needs	□	░	▨
3. Protection of Resource Values and Uses	░	▨	□
4. Social and Economic Concerns			
-perspective of anti-development segment of community	░	▨	□
-perspective of pro-development segment of community	░	□	▨

1/ Evaluation for activities other than preliminary exploration are not considered in alternative B. Evaluation would be made through the NFMA planning process as part of the Forest Plan environmental analysis process

Least Responsive	□
Intermediate	░
Most Responsive	▨

VII. IDENTIFICATION OF THE FOREST SERVICE PREFERRED ALTERNATIVE

The oil and gas decisionmaking process has systematically led to a development of a selected alternative. Rationale involved in reaching the decision includes the decision criteria identified earlier in this report, a series of "compelling reasons" for recommending the granting of leases for the exploration and development of leasable minerals, and the Forest Service's desire to cooperate with the Department of the Interior in administering lawful exploration and development of leasable minerals.

On the basis of alternative comparison and considering the evaluation criteria (e.g., laws, regulations, policy, etc.) the ID Team recommended Alternative C because it offers the best balance between resource protection and helping alleviate the National energy situation.

To reach the point of recommendation, the ID Team reviewed the summary of evaluation of alternative for each general category of evaluation criteria identified. (Section VI, Summary of Evaluation of Alternatives.)

Summary ratings were used only as a relative comparison between alternatives and categories of evaluation criteria. For example, alternative A is best at preserving environmental and human concerns, but is worst at helping alleviate the national energy situation. On the other hand, alternative C is best with the energy situation while potentially generating low to high levels of impacts.

The ID Team considered all evaluation criteria to be important in making their recommendations.

Alternative C, as previously described, is the preferred alternative. This alternative includes the following Forest Service actions:

1. Grant leases with stipulations for surface protection.
2. Evaluate applications against the Beaverhead Land Management Plan, against resource concerns identified in this environmental assessment, and against site specific data and information.
3. Apply appropriate stipulations, including "no-surface occupancy" in some instances, to restrict oil and gas activities on a portion or all of a given lease.
4. Refer to the Chief of the Forest Service the decision to recommend or deny leasing the wilderness areas and wilderness study areas.

This alternative was chosen since it best meets the evaluation criteria concerning Forest Service policy, national energy needs. Although this alternative has the potential to generate low to high levels of some resources or use impacts, protection of the surface and surface functions can largely be achieved through appropriate stipulations, including "no-surface occupancy," and effective planning and administration of oil and gas field activities. Both positive and negative social and economic effects would be generated, the number varying with the perception of the individual observer. Social and economic effects on nearby communities would be about the same whether activities occurred on public or private lands. Consequently, only a portion of the total social and economic effect can be attributed to oil and gas activity on National Forest lands.

VIII. MITIGATING MEASURES

Throughout the previous sections of this report many concerns with oil and gas leasing on the Beaverhead National Forest have been identified. It is the objective of this section to define mitigation needs and to develop a procedure to provide mitigation for those needs. See Table 5. Following is an explanation of the table:

Column A --	This is a list of concerns needing evaluation for mitigation. Concerns one through thirteen are discussed in the body of the environmental assessment (E.A.). Concerns relative to item fourteen recognize that lease evaluations must consider direction given in the Beaverhead Land Management Plan. It also considers other recognized unique and localized concerns. Item 15 will not result in the utilization of a particular stipulation but rather in the exchange of information when lease evaluations are being made which could influence the use of all stipulations.
Column B --	This is a cross-reference to the page number in this E.A. where the concern is discussed.
Column C --	An "X" in this column means that a decision to recommend or deny leasing is needed by the Chief of the Forest Service by means of an environmental analysis that considers wilderness values.
Column D --	An "X" in this column indicates that the standard stipulations attached by the Bureau of Land Management to all leases on National Forest lands will probably mitigate the concern. Appendix A contains these stipulations. They provide protection for resources and structures under "normal" forest situations. The "Stipulation for Lands Under Jurisdiction of Department of Agriculture" states that all operations will be conducted "with due regard for good land management." More specifically, it defines responsibilities for protection of many resources and prescribes actions to be taken concerning fire. It also directs that existing uses be recognized. The "Surface Disturbance Stipulations" (Appendix B) defines requirements of a lessee prior to entry upon the land or the disturbance of the surface for drilling. It requires that an environmental analysis be made setting forth conditions for operation. This environmental analysis requires definition of mitigating measures needed for resource protection when disturbing the surface on specific areas.

SUMMARY OF MITIGATION NEEDS

TABLE 5

		Mean to Mitigate			
A	B	C	D	E	F
Concerns identified in this E.A.	Discussed in this E.A.R. on page number shown below.	Lease application will not be acted upon under this E.A.R.	Standard stipulations appear adequate.	Special stipulations identified as needed.	Additional mitigations would be considered when surface disturbing activities are proposed.
1. Wilderness	3	X			
2. Proposed wilderness	3	X			
3. Designated for further planning	5			X	X
4. Fisheries management unit (as defined in the Land Management Plan -- confined to Ruby River area.)	43			X	X
5. Roadless management (as defined in Land Mgmt. Plan).	43			X	X
6. Threatened and endangered species	15			X	X
7. Big game winter range	15			X	X
8. Cultural values	16			X	X
9. Visual resource	17			X	X
10. Water (includes riparian zones for fish and aquatic life)	18			X	X
11. Grazing	19		X		X
12. Existing rights	20		X		X
13. Soil resource	20			X	X
14. Concerns not identified in this environmental assessment -- The following are examples of other items which should be considered even though not specifically mentioned in this environmental assessment: Administrative sites, buildings, Forest Travel Plan, direction in Beaverhead Land Management Plan, and any other concern identified when leases are evaluated on a lease-by-lease basis.					X

15. Needed coordination. The Bureau of Land Management administers lands interspersed with the Beaverhead National Forest. Since two federal agencies administer adjacent lands with oil and gas lease applications, consultation is needed to coordinate leasing. This will not result in stipulations in the lease but is nonetheless important in evaluating leases.

Column E -- An "X" in this column identifies concerns which are not likely to be fully mitigated by the standard stipulations referred to in Column "D". Special stipulations will be required to achieve mitigation needs (even though the standard stipulations in many cases may provide a degree of mitigation). In the interest of uniformity the Northern Region is developing a set of special stipulations for use by the national forests. Although these have not yet been approved by the U. S. Geological Survey, they are included in Appendix C to show the nature of the stipulations which could be utilized in granting a lease (if these special stipulations have not been approved for use when leases on the Beaverhead are processed, the special stipulations approved for the Deerlodge National Forest will be used in the interim).

Column F -- This column shows that when an application for surface disturbing activity is made by the lessee, that an environmental analysis will be made. As such, it assures that further mitigation will be considered prior to development.

Processing of lease applications (and reevaluation of existing leases on which a "no-surface occupancy" stipulation was applied to the entire lease) will begin with the district ranger evaluating each lease or lease application and making recommendations to the Forest Supervisor for disposition. The Beaverhead "Lease Evaluation Procedure — Part I" will be used to identify the need for special stipulations. The answers to the questions in this procedure provide a means to determine mitigating measures not covered sufficiently by the standard stipulations. The "Lease Evaluation Procedure" is on the following four-pages and for clarity the questions are listed in the same sequence as the concerns on Table 5.

The mitigating measures displayed in the right-hand column will be matched with an appropriate special stipulation(s). However, after leases and lease applications have been evaluated by the district ranger and the "Lease Evaluation Procedure -- Part I" has been completed, Part II will be used to display the special stipulations to be used. This form will be forwarded to the Forest Supervisor for review and approval. The Forest Supervisor will make his recommendations to the Bureau of Land Management.

The intent of this E.A. is to establish a procedure to evaluate lease applications now on file, reevaluate leases made with total coverage of a "no-surface occupancy" stipulation, and to provide the means to evaluate lease applications which may be received in the future.

Since there are several hundred lease applications and leases now on file to evaluate it was deemed appropriate to broadly display the effects of applying the Lease Evaluation Procedure to these leases and lease applications. This will permit those who have applied for an oil and gas lease to judge how their lease applications will be affected. Just as importantly, those concerned with protection of other resource values will be able to generally understand the extent of the mitigating measures. This display is shown in Appendix G.

Lease Evaluation Procedure -- Part I

Item of Concern	Yes or No	Mitigating Measures
1. WILDERNESS. Is any portion (of the lease or lease application area) within a wilderness? Check map of Anaconda Wilderness.		If yes. an environmental assessment must be submitted to the Chief of the Forest Service for a decision.
2. PROPOSED WILDERNESS. Is any portion within an area proposed for wilderness? Check RARE II maps.		If yes, an environmental assessment must be submitted to the Chief of the Forest Service for a decision.
3. FURTHER PLANNING.		
a. Is any portion with an area mandated by Congress in PL 95-150 for wilderness study? Check map of record for PL 95-150.		If yes, an environmental assessment must be submitted to the Chief of the Forest Service for a decision.
b. Is any portion within an area designated through the RARE II process for further planning? Check RARE II maps.		If yes (and area was not included in PL 95-150), special stipulations for areas in further planning must be used. In addition, other special stipulations will also apply.
4. FISHERIES MANAGEMENT UNIT. Is any portion within a fisheries management unit identified in the Beaverhead Land Management Plan? Check management direction in L.M.P.		If yes, use a "no-surface occupancy" stipulation on that percentage of lease affected.
5. ROADLESS MANAGEMENT. Does any portion contain direction in the Beaverhead L.M.P. for retention as roadless? Check management direction in L.M.P.		If yes, use a "no-surface occupancy" stipulation on that percentage of lease affected.
6. THREATENED AND ENDANGERED SPECIES. Is any portion within lands that have been designated by the U. S. Fish and Wildlife Service as "critical habitat" for threatened and endangered species or is any portion within lands identified by the Forest Service as potential critical habitat? Check maps on file with the Forest Wildlife Biologist and consult with the Fish and Wildlife Service.		Whether yes or no, see "Consultation with U. S. Fish and Wildlife Service" contained in Appendix F.

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Item of Concern	Yes or No	Mitigating Measures
7. BIG GAME WINTER RANGE. Has any portion been identified as big game winter range. Check maps on file with the Forest Wildlife Biologist.		If yes, use a stipulation which provides for a time or conditions when a specified activity (i.e., all surface disturbing activity, exploration, drilling development) cannot take place.
8. CULTURAL VALUES.		
a. Has an inventory been made of archeological, paleontological, and historical sites? Consult with Resource Program Officer.		If no, use a stipulation which prevents entering upon a lease area or disturbing the surface for exploration or drilling purposes until an inventory is made. Provide for protection of significant values encountered.
b. Does any portion contain an inventoried archeological, paleontological or historical site? Check statewide archeological data file.		If yes, use a stipulation which prohibits occupancy within a specified distance of the site.
9. VISUAL RESOURCE.		
a. Are there roads or trails on the transportation system on any portion. Check transportation system maps and records.		If yes, use a stipulation which prohibits occupancy within 500 feet of a road and 200 feet of a trail. Must justify the use of different distance.
b. Is any portion in a location where semi-permanent facilities may require painting or camouflage to blend with the natural surroundings? Consult with Forest Landscape Architect.		If yes, use a stipulation that may require painting or camouflaging to blend with the natural surroundings.
c. Is any portion located in such a way that it is visually sensitive from a road, lake, river or campground? Consult with Forest Landscape Architect.		If yes, use a stipulation that restricts access, earth cut or fill, structure or other improvements, other than an active drilling rig. Stipulation should provide for mitigation of unavoidable conflicts.

Item of Concern	Yes or No	Mitigating Measures
10. WATER. Does any portion contain first order[1/] streams or greater as displayed on stream order map on file with the Wildlife Biologist? Also, does any portion contain ponds, reservoirs or lakes?		If yes, use a stipulation which prohibits occupancy within 500 feet of the drainage or body of water. Must justify the use of a different distance.
11. GRAZING. Will standard stipulations mitigate concern? (It has been determined that usually they will.)		If no, enter concern under Item 14 below and show need for special stipulation.
12. EXISTING RIGHTS. Will standard stipulations mitigate concern? (It has been determined that usually they will.)		If no, enter concern under Item 14 below and show need for special stipulation.
13. SOIL RESOURCE.		
a. Does any portion contain slopes over 65%. Check topographic map.		If yes, use a stipulation which prohibits occupancy on that percentage of lease affected.
b. Does any portion contain land types that are sensitive to mass failure. Consult with Forest Soil Scientist.		If yes, use a stipulation which prohibits occupancy on that percentage of lease affected.
c. Are there other land types on any portion subject to mass failure if slopes are over 35%? Consult with Forest Soil Scientist.		If yes, use a stipulation which prohibits occupancy on that percentage of lease affected.
d. Are there land types on any portion which are highly susceptible to soil compaction? Consult with Forest Soil Scientist.		If yes, use a stipulation which prohibits off-road vehicle travel or use of vibrator or thumper-type seismic equipment except during dry periods.

Item of Concern	Yes or No	Mitigating Measures
14. CONCERNS NOT IDENTIFIED IN THIS ENVIRONMENTAL ANALYSIS. For example:		
Is there conflict with direction in the Beaverhead Land Management Plan?		If yes, list concern on a separate sheet and explain special stipulations needed.
Are there wildlife concerns not adequately covered by the concerns listed above?		If yes, list concern on a separate sheet and explain special stipulations needed. Also, consult with Forest Wildlife Biologist.
Are there administrative sites or buildings on the lease area?		If yes, use a no-surface occupancy stipulation on the affected area.
Are there any other concerns not mentioned above?		If yes, consider the need for a special stipulation.
15. Is there Public Domain land adjacent to the lease area?		If yes, consult with the local Bureau of Land Management managers to exchange information.

1/ For the purposes of evaluating oil and gas leases, a first order stream will be defined as any mapable unbranched tributary on a ½ inch-to-the-mile map. A second order stream is formed when two first order streams join. A third order . . ., etc., to the ocean.

Lease Evaluation Procedure - Part II

Ranger District ______________________ **Oil and Gas Lease Identification Number** ______________

The following stipulations should be attached to this lease.

Percent Restricted ________ Percent Open ________

Special Stipulation Number	Reason Special Stipulation is Needed	Percent of Lease Affected

Prepared by: ______________________ **Date:** ______________

Submitted by: ______________________ **Date:** ______________
(District Ranger)

Reviewed by: ______________________ **Date:** ______________
(Lands Specialist)

Recommended by: ______________________ **Date:** ______________
(Forest Supervisor)

Approved by: ______________________ **Date:** ______________
(Regional Forester)

IX. CONSULTATION WITH OTHERS

Public concern about oil and gas leases on the Beaverhead National Forest was identified formally in 1977 during public review of the draft environmental statement and land management plan for the Beaverhead N.F. The draft plan described the existing oil and gas situation and what action would be taken on the oil and gas applications pending completion of the Land Use Plan. The draft plan also discussed generally, the long-term affects of any oil and gas development.

On August 15, 1977, an environmental analysis report on oil and gas leasing on the Beaverhead National Forest was issued. The purpose of this environmental analysis report was to analyze the impact of a "no-occupancy" stipulation and to determine if such stipulations would be suitable for use on the Beaverhead National Forest. This environmental analysis report was to be used to permit exploration activities by those lease applicants who desire a "no-occupancy" stipulation for a non-disturbing type of exploratory work. Additional examination and evaluation would be necessary before other exploratory or developmental activities would be allowed.

In addition to the above, an information summary pamphlet was mailed to interested individuals and the news media in April of 1979. This pamphlet generated an inquiry from the Beaverhead Forest Concerned Citizens (BFCC) located in Butte. The Forest Supervisor and other Forest personnel attended a meeting with the BFCC in which the oil and gas situation on the Beaverhead National Forest was discussed. The BFCC was concerned about specific areas where wildlife would be affected. Also, many other informal contacts have been made with various public segments, especially the oil and gas industry.

The local Dillon office of the BLM was contacted to discuss the need for coordinating action on adjacent lease applications (the Beaverhead National Forest and the Public Domain adminstered by BLM is interspersed in many areas). Both agencies agreed to consult at the time either agency was in the process of evaluating a lease application adjacent to land administered by the other agency.

An interagency meeting was held in Missoula in June of 1979 between the U. S. Fish and Wildlife Service and the Forest Service. This meeting established commitments and level of involvement for each participating agency in the protection of Threatened and Endangered wildlife species.

An Inform and Involve (I&I) Plan has been prepared and initiated to inform and seek public involvement in this environmental assessment process on oil and gas leasing. The decision to prepare an I&I Plan was made because of the lack of public knowledge about oil and gas activity. A copy of this Plan is on file in the office of the Beaverhead National Forest.

On July 16, 1979, Chuck Sundstrom and Frank Fowler visited the U. S. Fish and Wildlife Service offices in Billings to specifically discuss Threatened and Endangered habitats on the Beaverhead. After this discussion Sundstrom prepared a letter to explain the relationship of oil and gas leasing on the Beaverhead with threatened and endangered species. This letter is included as Appendix E.

X. APPENDIX

A. Stipulations for lands under jurisdiction of Department of Agriculture

B. Surface disturbance stipulations

C. Northern Region Draft of Surface Protection Stipulations

D. NTL-6

E. Forest Wildlife Biologist's July 17, 1979, memorandum on oil and gas leasing

F. Procedure for Consultation with Fish and Wildlife Service on Endangered and Threatened Species

G. Broad Application of "Lease Evaluation Procedure"

Form 3109-3
(June 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STIPULATION FOR LANDS UNDER JURISDICTION OF DEPARTMENT OF AGRICULTURE*

The lands embraced in this lease or permit being under the jurisdiction of the Secretary of Agriculture, the lessee or permittee hereby agrees:

(1) To conduct all operations authorized by this lease or permit with due regard for good land management, not to cut or destroy timber without first obtaining permission from the authorized representative of the Secretary of Agriculture, and to pay for all such timber cut or destroyed at the rates prescribed by such representative; to avoid unnecessary damage to improvements, timber, crops, or other cover; unless otherwise authorized by the Secretary of Agriculture, not to drill any well, carry on operations, make excavations, construct tunnels, drill, or otherwise disturb the surface of the lands within 200 feet of any building standing on the lands and whenever required, in writing, by the authorized representative of the Secretary of Agriculture to fence or fill all sump holes, ditches, and other excavations, remove or cover all debris, and so far as reasonably possible, restore the surface of the lands to their former condition, including the removal of structures as and if required, and when required by such representative to bury all pipelines below plow depth.

(2) To do all in his power to prevent and suppress forest, brush, or grass fires on the lands and in their vicinity, and to require his employees, contractors, subcontractors, and employees of contractors or subcontractors to do likewise. Unless prevented by circumstances over which he has no control, the lessee or permittee shall place his employees, contractors, subcontractors, and employees of contractors and subcontractors employed on the lands at the disposal of any authorized officer of the Department of Agriculture for the purpose of fighting forest, brush, or grass fires on or originating on the lands or on adjacent areas or caused by the negligence of the lessee or permittee or his employees, contractors, subcontractors and employees of contractors and subcontractors, with the understanding that payment for such services shall be made at rates to be determined by the authorized representative of the Secretary of Agriculture, which rates shall not be less than the current rates of pay prevailing in the vicinity for services of a similar character: *Provided*, that if the lessee or permittee, his employees, contractors, subcontractors, or employees of contractors or subcontractors, caused or could have prevented the origin or spread of said fire or fires, no payment shall be made for services so rendered.

During periods of serious fire danger to forest, brush, or grass, as may be specified by the authorized representative of the Secretary of Agriculture, the lessee or permittee shall prohibit smoking and the building of camp and lunch fires by his employees, contractors, subcontractors, and employees of contractors or subcontractors within the area involved except at established camps, and shall enforce this prohibition by all means within his power: *Provided*, that the authorized representative of the Secretary of Agriculture may designate safe places where, after all inflammable material has been cleared away, campfires may be built for the purpose of heating lunches and where, at the option of the lessee or permittee, smoking may be permitted.

The lessee or permittee shall not burn rubbish, trash, or other inflammable materials *except* with the consent of the authorized representative of the Secretary of Agriculture and shall not use explosives in such a manner as to scatter inflammable materials on the surface of the lands during the forest, brush, or grass fire season, *except* as authorized to do so or on areas approved by such representative.

The lessee or permittee shall build or construct such fire lines or do such clearing on the lands as the authorized representative of the Secretary of Agriculture decides is essential for forest, brush, and grass fire prevention which is or may be necessitated by the exercise of the privileges authorized by this lease or permit, and shall maintain such fire tools at his headquarters or at the appropriate location on the lands as are deemed necessary by such representative.

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* This form of stipulation may be used in connection with leases and permits issued under the Acts of February 25, 1920, as amended (30 U.S.C. 181 *et seq.*), August 7, 1947 (30 U.S.C. 351 *et seq.*), February 7, 1927, as amended (30 U.S.C. 281 *et seq.*), April 17, 1926, as amended (30 U.S.C. 271 *et seq.*), June 28, 1944 (58 Stat. 483–485); September 1, 1949 (30 U.S.C. 192c), June 30, 1950 (16 U.S.C. 508b), or under the authority of any of the Acts cited in Section 402 of the President's Reorganization Plan No. 3 of 1946 (5 U.S.C. 133y–16, Note).

(3) In the location, design, construction, and maintenance of all authorized works, buildings, plants, waterways, roads, telegraph or telephone lines, pipelines, reservoirs, tanks, pumping stations, or other structures or clearance, the lessee or permittee shall do all things reasonably necessary to prevent or reduce to the fullest extent scarring and erosion of the lands, pollution of the water resources and any damage to the watershed. Where construction, operation, or maintenance of any of the facilities on or connected with this lease or permit causes damage to the watershed or pollution of the water resources, the lessee or permittee agrees to repair such damage and to take such corrective measures to prevent further pollution or damage to the watershed as are deemed necessary by the authorized representative of the Secretary of Agriculture.

(4) If in the opinion of the authorized representative of the Secretary of Agriculture, the lands are valuable for watershed protection, the lessee or permittee shall provide for control of surface runoff and return the affected area to as productive condition as practicable.

(5) To pay the lessor or permitter or his tenant or the surface owner or his tenant, as the case may be, for any and all damage to or destruction of property caused by the lessee's or permittee's operations hereunder; to save and hold the lessor or permitter or the surface owner or their tenants harmless from all damage or claims for damage to persons or property resulting from the lessee's or permittee's operations under this lease or permit.

(6) To recognize existing uses and commitments, in the form of Department of Agriculture grazing, timber cutting, and special use permits, water developments, ditch, road, trail, pipeline, telephone line, and fence rights-of-way and other similar improvements, and to conduct his operations so as to interfere as little as possible with the rights and privileges granted by these permits or with other existing uses.

(7) To install and maintain cattle guards to prevent the passage of livestock in any openings made in fences by the lessee or permittee or his contractors to provide access to the lands covered by this lease or permit for automotive and other equipment.

(8) If lessee or permittee shall construct any camp on the lands, such camp shall be located at a place approved by the authorized representative of the Secretary of Agriculture, and such representative shall have authority to require that such camp be kept in a neat and sanitary condition.

(9) To comply with all federally-approved rules and regulations of the Secretary of Health, Education, and Welfare governing the emission of pollutants into the air from activities which are embraced in this lease or permit.

(10) To comply with all the rules and regulations of the Secretary of Agriculture governing the national forests or other lands under his jurisdiction which are embraced in this lease or permit.

(11) Unless otherwise authorized, prior to the beginning of operations to appoint and maintain at all times during the term of this lease or permit a local agent upon whom may be served written orders or notices respecting matters contained in this stipulation, and to inform the authorized representative of the Secretary of Agriculture, in writing, of the name and address of such agent. If a substitute agent is appointed, the lessee or permittee shall immediately so inform the said representative.

(12) To address all matters relating to this stipulation to

at

who is the authorized representative of the Secretary of Agriculture, or to such other representative as may from time to time, be designated, provided that such designation shall be in writing and be delivered to the lessee or permittee or his agent.

____
(Signature of Lessee)

☆ U.S. Government Printing Office: 1973—783-[illegible] Region [illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SURFACE DISTURBANCE STIPULATIONS

[redacted]

District Engineer (Address, include zip code)
United States Geological Survey
P. O. Box 2550
3 Seventh Street West
Billings, Montana 59103
Phone: 406-245-6711, Ext. 6367

Management Agency (name)

Address (include zip code)

1. Notwithstanding any provision of this lease to the contrary, any drilling, construction, or other operation on the leased lands that will disturb the surface thereof or otherwise affect the environment, hereinafter called "surface disturbing operation," conducted by lessee shall be subject, as set forth in this stipulation, to prior approval of such operation by the Area Oil and Gas Supervisor in consultation with appropriate surface management agency and to such reasonable conditions, not inconsistent with the purposes for which this lease is issued, as the Supervisor may require to protect the surface of the leased lands and the environment.

2. Prior to entry upon the land or the disturbance of the surface thereof for drilling or other purposes, lessee shall submit for approval two (2) copies of a map and explanation of the nature of the anticipated activity and surface disturbance to the District Engineer or Area Oil and Gas Supervisor, as appropriate, and will also furnish the appropriate surface management agency named above, with a copy of such map and explanation.

An environmental analysis will be made by the Geological Survey in consultation with the appropriate surface management agency for the purpose of assuring proper protection of the surface, the natural resources, the environment, existing improvements, and for assuring timely reclamation of disturbed lands.

3. Upon completion of said environmental analysis, the District Engineer or Area Oil and Gas Supervisor, as appropriate, shall notify lessee of the conditions, if any, to which the proposed surface disturbing operations will be subject.

Said conditions may relate to any of the following:

(a) Location of drilling or other exploratory or developmental operations or the manner in which they are to be conducted,

(b) Types of vehicles that may be used and areas in which they may be used; and

(c) Manner or location in which improvements such as roads, buildings, pipelines, or other improvements are to be constructed.

Form 3109-5 (August 1973)

NORTHERN REGION DRAFT
of
Surface Protection Stipulations

The following stipulations are necessary to protect resource values identified in existing management direction in plans of the surface management agency. These limitations may be modified when specifically approved in writing by the District Engineer, Geological Survey (GS), with concurrence of the authorized officer of the surface management agency.

The number of stipulations can be kept to a minimum using this approach and should cover most situations. The need for additional stipulations should be low. If a situation does arise in the future and it cannot be covered under one of the approved stipulations a new stipulation will be added. All new stipulations will be submitted to the Regional Office (FS) or Montana State Office (BLM) for review and coordination. All new stipulations will be submitted to the United Geological Survey for approval.

The stipulations applicable to a lease will be checked in the left hand column.

1. No occupancy or other activity on the surface of the following described lands is allowed under this lease. ( ) Approximately % of lease.

   Reasons for this restriction are: (Enter reasons)

   (Example of reasons are steep slopes, specific ecosystem, roadless areas, water supply, administrative site, etc.)

2. Prior to the applicant undertaking any ground disturbing activities on the land covered by this lease, a competent review must be completed to determine the presence of any endangered or threatened plant or animal species or their habitats which will be affected by the operation. This may result in some restrictions to the applicant's plans or even disallow surface use and occupancy.

   To help meet his own schedules, the applicant may desire to deposit funds with the Forest Service to have a competent review made under the supervision of a qualified specialist (botanist, wildlife or fisheries biologist) approved by the Forest Service. A report will be provided identifying the anticipated effects of the proposed action on the endangered or threatened species or their habitats.

   The area is currently mapped:_______________(yes or no).

   If yes, ( ) Approximately % of lease.

3. No________ ______will be allowed within ________feet of the _________.
   This area contains___________acres and is described as follows:

(describe area)

( ) Approximately % of lease.

Note: First blank to be filled in with one or more of the following: drilling, storage facilities, surface disturbance or occupancy. Second and third blanks to be filled in with one or more of the following:
1. "X" feet wildlife habitat essential to specific species.
2. "X" feet peripheral or unique vegetative type
3. 500 feet either side of centerline of roads
4. 500 feet of normal high water line on all streams, rivers, ponds, reservoirs, lakes
5. 600 feet of all springs
6. 400 feet of any improvements

4. In order to (minimize) (protect)____________________________________, ____will be allowed only during____________________________________. This (does not) (does) apply to maintenance and operation of producing wells and facilities. Lands within leased area to which this stipulation applies are described as follows:

(describe)

( ) Approximately % of lease.

Note: First blank to be filled in with one or more of the following: watershed damage, soil erosion, seasonal wildlife habitat (winter range, calving/lambing area, etc.), and conflict with recreation.

Second blank to be filled in with one or more of the following: surface disturbing activities, exploration, drilling, and development.

Third blank to be filled in with one or more of the following: period from __________to___________, dry soil periods, over the snow, and frozen ground.

5a. Lessee agrees not to enter upon the lease area or disturb the surface for exploration or drilling purposes until either:

(1) An inventory of archeological, paleontological, and historical sites is made by the surface management agency or its designated representative, or

(2) Lessee has engaged the services of a qualified cultural resource specialist to conduct an intensive cultural resource inventory of the area, submitted an acceptable report, and taken such measures as deemed necessary to preserve or avoid destruction of cultural resource values. Mitigation may include relocation of proposed facilities, testing and salvage or other protective measures deemed necessary by the authorized officer. All costs of the survey

and salvage of cultural resource values will be borne by the lessee or operator and all data and materials salvaged will remain under the operator and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.

(3) Should significant values be encountered in areas of the proposed action, prior to or during surface disturbance, the information will be forwarded to the District Engineer, U.S. Geological Survey and the authorized officer of the surface management agency. Such discoveries will be left intact until evaluated and appropriate action determined.

( ) Approximately % of lease.

5b. This lease contains an inventoried____________________. Site located in ___________ Section_____T _______, R______. No occupancy will be allowed within __________feet of this site containing __________ acres until the site has been evaluated professionally.

( ) Approximately % of lease.

Note: First blank to be filled in with one or more of the following: historical, archeological, paleontological.

6a. To maintain esthetic values, all semi-permanent facilities may require painting or camouflage to blend with the natural surroundings. The paint selection or method of camouflage will be subject to approval by the District Engineer, Geological Survey (GS), with the concurrence of the authorized officer of the surface management agency.

6b. No access or work trail or road, earth cut or fill, structure or other improvements, other than an active drilling rig, will be permitted if it can be viewed from the ___________________. Unavoidable conflicts to this provision may be resolved through the use of camouflage and visual screening techniques. Mitigation of visual impacts resulting from exploration, development, and production activities will be required in the multipoint surface use and operations plan. These mitigation measures will be based on the visual quality objectives for the area and subject to the approval of the District Engineer, U.S. Geological Survey, with the concurrence of the authorized officer of the surface management agency.

Note: Blank to be filled in with road, lake, river, etc.

7. By accepting this lease, the lessee acknowledges that the lands contained in this lease which are identified below are being inventoried or evaluated for their wilderness potential by the Bureau of Land Management under Section 603 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2743, 2785 (43 USC Section 1782).

☐ All lands within the lease

☐ Part of the lands within the lease described as follows:

(describe)

( ) Approximately % of lease

Until the BLM determines that the lands described above do not meet the criteria for a wilderness study area as set forth in Section 603, or until Congress decides against the designation of lands included within this lease as "wilderness," the following conditions apply to this lease, and override every other provision of this lease which could be considered as inconsistent with them and which deal with operations and rights of the lessee:

(1) Any oil or gas activity conducted on the leasehold for which a surface use plan is not required under NTL-6 (for example: geophysical and seismic operations) may be conducted only after the lessee first secures the consent of the BLM. Such consent shall be given if BLM determines that the impact caused by the activity will not impair the area's wilderness characteristics.

(2) Any oil and gas exploratory or development activity conducted on the leasehold which is included within a surface use plan under NTL-6 is subject to regulation (which may include no occupancy of the surface) or, if necessary, disapproval until the final determination is made by Congress to either designate the area as wilderness or remove the Section 603 restrictions. If all or any part of the area included within the leasehold estate is formally designated by Congress as wilderness, oil and gas exploration and development operations taking place or to take place on that part of the lease shall become subject to the provisions of the Wilderness Act of 1964 which apply to national forest wilderness areas, 16 USC Sec. 1131 et. seq., as amended, the Act of Congress designating the land as wilderness, and Interior Department regulations and policies pertaining thereto. If it is found that the area does not have wilderness characteristics or is not suitable to be designated a part of the National Wilderness Preservation system, development and/or surface occupancy will be subject to the remaining lease terms and the special stipulations.

Note: Does not require special guidelines except to say that it is to be used only by the Bureau of Land Management.

8a. Access will be limited to existing route(s).

8b. ____________________ will not be used as an access route(s).

8c. Use of ________________as an access route for activities on this lease will be restricted as follows:

Note: 8b blank to be filled in with: road or trail number or name
8c blank to be filled in with: road or trail number or name
Restrictions:
1. No reconstruction
2. No weekend or holiday use
3. One-way travel (uphill or downhill)
4. Light duty vehicles 3/4 ton or less

9. The lessee, his agents, subcontractors, or other designated representatives of the lessee while acting in an official capacity relating to exploring for, developing, or producing oil and gas will be prohibited from carrying firearms in the lease area or on Federal land adjacent to the lease area, except as specifically authorized by the authorized officer of the Surface Management Agency.

10. The lease includes lands within________________________________
____.
In order to reduce the level of activity at any one point in time, the lessee agrees to restrict his activity on this lease to include no more than geological/geophysical exploration activities for the first (1, 2, 3) year(s) after the effective date of this lease.
Circle one

Note: Blank to be filled in with one or more of the following:
1. Wildlife habitat essential to specific species (grizzly bear, etc.)
2. Special management units such as: Recreation Type I water supply, wilderness, etc.

11. The lease includes lands within________________________________
____.
Exploration and development within this area will be unitized to reduce the level of activity at any one time. A unitization agreement must be approved by the District Engineer, Geological Survey (GS), with the concurrence of the authorized officer of the surface management agency prior to filing an Application for Permit to Drill (APD). If Federal lands within this area are not included, acceptable documentation for the exclusion must be provided.

Note: Blank to be filled in with one or more of the following:
1. Wildlife habitat essential to specific species (grizzly bear, etc.)
2. Special management units such as: Recreation Type I, water supply, wilderness, etc.

12. "The following described lands embraced in this (lease, permit, license) were identified in the Roadless Area Review and Evaluation (RARE II) decision document as requiring further planning:

(describe)

( ) Approximately % of lease.

Future planning may identify all or part of these lands as suitable for wilderness, and the lands so identified may ultimately be designated as wilderness. Information made available to the Forest Service regarding discoveries of mineral deposits on these lands will be considered in the planning process and may be key factors in the land allocation.

Notwithstanding any terms of this (lease, permit, license) to the contrary, the following terms shall apply to the above described lands:

A. Only exploration activities for the purposes of discovering and disclosing the extent of mineral deposits is allowed, until development and production operations are specifically approved by the Forest Service based on the applicable land management plan and/or a specific environmental analysis of an operating plan.

B. Exploration plans must be specifically approved by the Forest Service, in cooperation with the Geological Survey, under established procedures. The Forest Service will provide reasonable access for conducting necessary exploration operations.

C. Any lands covered by this (lease, permit, license) which Congress designates as wilderness shall become subject to the provisions of the Wilderness Act of September 3, 1964, (78 Stat, 890), as amended or supplemented, and the Secretary of Agriculture's regulations and Forest Service policies pertaining thereto.

D. The (lessee, permittee, licensee) will be responsible, as he deems necessary to protect his interest, for initiating requests to the Department of the Interior for suspension of (lease, permit, license) terms, rental, or minimum royalties. The Forest Service does not intend that the inclusion of this stipulation should be construed as a basis to deny a request for suspension.

E. Access ways and operation sites for either exploratory, developmental, or production activities are subject to the following terms:

(1) Construction of access ways and operational sites will not be permitted in areas of extremely high environmental sensitivity where such construction would cause serious and irreparable environmental damage.

(2) Access way construction will be permitted only where existing access ways or other methods of access are inadequate or impractical.

(3) Access ways will be built to a standard no higher than required for passage of equipment and support eprsonnel, and to protect surface resources.

(4) The access ways and other areas of operation will be reclaimed, as soon as they have served their purpose, to a condition as near as practical to the surface condition existing prior to the authorized use of the lands.

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CONSERVATION DIVISION

Notice to Lessees and Operators of
Federal and Indian Onshore Oil and Gas Leases
(NTL-6)

APPROVAL OF OPERATIONS

In accordance with the National Environmental Policy Act of 1969 (83 Stat. 852), the United States Geological Survey must assure that operations on oil and gas leases under its jurisdiction are conducted with due regard for protection of the environment. All operations which are conducted on onshore Federal and Indian oil and gas leases must conform to the requirements of this Notice as well as those contained in the lease and in the Oil and Gas Operating Regulations, Title 30 CFR Part 221. Operations on Osage Indian oil and gas leases and exploration activities under Title 43 CFR 3045 are not included within the purview of this Notice.

As used in this Notice, the term "District Engineer" means that Officer of the United States Geological Survey who is the head of the District Office supervising operations in the geographic area in which the operation is located. In the State of Alaska, the Area Oil and Gas Supervisor will administer the requirements of this Notice. In some special instances, other Area Oil and Gas Supervisors will act on permit applications.

I. General

In order that the environmental impact of proposed operations may be properly evaluated, all applications to conduct leasehold operations or construction activities must be accompanied by an appropriate surface use plan. As a minimum, such applications and surface use plans must provide a detailed description of the technical aspects of the proposed operation or activity, the magnitude of surface disturbance involved, and the procedures to be followed in rehabilitating the surface once the operation or construction activity has been completed. Specific requirements in this regard are set forth in Sections II.B., III., and V. hereof. One copy of the surface use plan must be attached to each copy of the application to conduct operations or construction activities.

Applications to conduct operations or construction activities with attached surface use plans should be filed at least 30 days in advance of the contemplated starting date of any operation or construction activity in order to allow sufficient time in which to schedule and conduct, if necessary, a joint field inspection by appropriate personnel of the Geological Survey, the Federal surface management agency, the lessee or operator, and, if practical, the lessee's or operator's contractors and subcontractors who will perform the work. Any interested party who wishes may also attend the field inspection. The early filing of a complete application is no guarantee that approval thereof will be granted within the 30-day period, as environmental considerations or the volume of applications in the affected Federal agencies may result in more than 30-day delay.

All applications will be processed as quickly as possible in all Federal agencies consistent with other work in the offices. In general, the processing of applications will be assigned a high priority and individual applications will be processed according to the date the complete application is filed. A higher priority due to an emergency, such as an imminent lease expiration date, will be duly considered but no special consideration will be given simply because a late filing is made. If it is not possible for Geological Survey action to be taken prior to lease expiration or within 30 days of the filing date, whichever occurs first, the lessee or operator will be advised both orally and in writing. Said advice will detail the reasons for the delay so that the lessee or operator may take such appeal or other recourse as is allowed by law and/or regulation.

Lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which (1) results in diligent development and efficient resource recovery; (2) affords adequate safeguards for the environment; (3) results in the proper rehabilitation of disturbed lands; (4) assures the protection of the public health and safety; and, (5) conforms with the best available practice. In that regard, lessees and operators will be held fully accountable for their contractors' and subcontractors' compliance with the requirements of the approved permit and surface use plan.

All approvals of proposed operations as well as subsequent instructions and regulation thereof will be by the District Engineer of the Geological Survey. However, the Federal surface management agency will establish the rehabilitation requirements and will be available for consultation during rehabilitation operations. Names, addresses, and phone numbers of appropriate personnel of the Geological Survey and the Federal surface management agency, as well as approved surface use areas, will be furnished the lessee or operator with its approved copy of the permit and surface use plan.

Lessees and operators, as well as their contractors and subcontractors, must not commence any operation or construction activity on a lease without the prior approval of the appropriate official of the Geological Survey. Said approvals may be oral in emergency situations or in instances such as subsurface plugging programs for newly-drilled dry holes or failures. Any oral approval so received must be followed by a written application and approval thereof for confirmation. Likewise, the terms and conditions of an approved permit and surface use plan may not be altered unless the Geological Survey has approved an amended or supplemental permit and/or plan covering any such modifications. Approval of subsequent operations is addressed in Section V. of this Notice.

II. Drilling Operations

A. Preliminary Environmental Review

A preliminary environmental review is required on all future drilling operations prior to entry on the ground for the purpose of staking the location, access roads, and other surface use areas. The lessee or operator, upon finalizing plans to drill but prior to the actual surveying, must file with the Geological Survey's District Engineer and the appropriate office of the involved Federal surface management agency, a topographic map, or such other map as is acceptable to the District Engineer, scale not less than 1 inch = 1 mile which shows the preferred location and the general topographic features in the area. This will permit the Federal suface management agency, prior to the lessee's or operator's expenditure of time and money for surveys, to review its records for any potential conflicts with other resource values. If conflicts are noted, a joint conference or field inspection, as appropriate, by the Geological Survey, the Federal surface management agency, the lessee or operator, and other interested parties may be scheduled to resolve problem areas. If the lessee or operator has not been advised to the contrary within 15 days from the date of submitting the preliminary map, it may assume that there are no objections to entry on the land for the purpose of required surveying and staking and may proceed accordingly. It is anticipated that the need for a joint field conference and/or inspection prior to staking will be very unusual.

B. Application for Permit to Drill

Drilling operations must not be conducted without a permit which has the prior approval of the District Engineer. Although multiple wells may be covered in a single surface use plan, the application for permit to drill must be submitted on an individual well basis.

The permit application filed for approval will consist of Form 9-331C (Application for Permit to Drill, Deepen, or Plug Back) and a multi-point surface use and operations plan. Where private surface is involved, it should also include a copy of the written agreement between the lessee or operator and the surface owner, a letter from the lessee or operator setting forth the rehabilitation requirements agreed to with said owner, or a letter stating the reasons why such agreement is not obtainable. The requirements for surface use and operations plans and the rehabilitation of private surface are contained in Sections III. and VI., respectively, of this Notice.

The application for permit to drill must provide information concerning (1) the location, as determined by a registered surveyor, in feet and direction from the nearest section lines of an established public land survey or, in areas where there are no public land surveys, by such other method as is acceptable to the District Engineer; (2) the elevation above sea level of the unprepared ground; (3) the geologic name of the surface formation; (4) the type of drilling tools and associated equipment to be utilized; (5) the proposed drilling depth; (6) the estimated tops of important geologic markers; (7) the estimated depths at which anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered; (8) the proposed casing program including the size, grade, and weight of each string and whether it is new or used; (9) the proposed setting depth of each casing string and the amount and type of cement (including additives) to be used; (10) the lessee's or operator's minimum specifications for pressure control equipment which is to be used, a schematic diagram thereof showing sizes, pressure ratings (or API series), and the testing procedures and testing frequency; (11) the type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling and the quantities and types of mud and weighting material to be maintained; (12) the testing, logging, and coring programs to be followed with provision made for required flexibility; (13) any anticipated abnormal pressures or temperatures expected to be encountered or potential hazards such as hydrogen sulfide gas, along with plans for mitigating such hazards; (14) the anticipated starting date and duration of the operation; and, (15) any other facets of the proposed operation which the lessee or operator wishes to point out for the Geological Survey's consideration of the application. The District Engineer will require additional information as warranted.

A copy of the approved application for permit to drill and the accompanying surface use and operations plan along with any conditions of approval shall be available to authorized personnel at the drillsite whenever active construction or drilling operations are underway.

III. Multi-Point Surface Use and Operations Plan

A surface use and operations plan in sufficient detail to permit a complete appraisal of the environmental effects associated with the proposed project must be submitted, in triplicate, to the District Engineer with the application for permit to drill.

The Geological Survey will send a copy of such plan to the Federal surface management agency. When possible, a preliminary field development plan or drilling schedule concerning the lessee's or operator's plans for additional development should also be submitted to allow lead time for evaluating environmental considerations, resource conflicts, and land use planning alternatives.

The surface use and operations plan shall, in its context, provide for adequate protection of surface resources, other environmental components, and include adequate measures for rehabilitation of disturbed lands. The plan shall be developed in conformity with the provisions of the lease, attached stipulations, and the guidelines provided by this Notice. In developing the plan, the lessee or operator will make use of such information as is available from the Federal surface management agency concerning the surface resources, environmental considerations, and local rehabilitation procedures. The plan will be reviewed for adequacy by the Geological Survey and the Federal surface management agency. The Geological Survey will act as the lead agency in assessing the effects of the plan. If the plan is considered inadequate, the Geological Survey will, in consultation with the Federal surface management agency, require modification or amendment of the plan or otherwise set forth such stipulations or conditions of approval as are necessary for the protection of surface resources and environment, including rehabilitation of the disturbed areas.

A. Guidelines for the preparation of surface use and operations plan

In the preparation of surface use and operations plans, lessees and operators should submit maps, facility layouts and narrative descriptions which adhere closely to the following:

1. Existing roads. A legible map (USGS topographic, county road map, or such other map as is acceptable to the District Engineer and the Federal surface management agency) shall be used for locating the proposed well site in relation to a town or other locatable reference point. The proposed route to the location including appropriate distances from the reference point to the point where the access route exits the highway or county road shall be shown. All proposed access roads shall be appropriately labeled or color coded. Additionally, all existing roads within a radius of three miles (including information relative to the type of surface, condition, and load capacity) from the location of a proposed exploratory well should be shown. For the purpose of this Notice, an exploratory well is defined as a well which is located two miles or more from the boundary of a Known Geologic Structure (as such term is defined by USGS) or a producible well. For all other drillsites (development wells), existing roads within a one-mile radius of the location should be shown.

   Any plans for the improvement and/or maintenance of existing roads should also be stated.

   Information required by item Nos. 2, 3, 4, 5, 6, 7, and 9 of this subsection may also be shown on this map if appropriately labeled.

2. Planned access roads. Information in this regard is to be submitted on a map of suitable scale and shall appropriately identify all permanent and temporary access roads that are to be constructed, or reconstructed in connection with the drilling and production of the proposed well. Width,

maximum grade, turnouts, drainage design, location and size of culverts, and surfacing material, if any, shall be stated. At the time of submittal, the center line location of all proposed new or reconstructed roads shall be staked with the stakes being visible from any one to the next. However, modification of proposed road design may be required after the location is accepted for drilling. If the well is completed for production, final road design and construction will depend on the amount and type of hydrocarbon found by the well. Information should also be furnished to indicate where existing fences will be cut and whether gates or cattleguards will be used. Additionally, the discussion should make reference to any existing gates which are to be replaced by cattleguards. Cattleguards which are installed or replaced must be designed to adequately carry anticipated loads.

3. Location of existing wells. This information should be submitted on a map of suitable scale and include all wells (water, abandoned, temporarily abandoned, disposal, and drilling) within a two-mile radius of the proposed location of an exploratory well and all wells (water, producing, abandoned, temporarily abandoned, shut-in, injection, disposal, and drilling) within a one-mile radius of the proposed location of a development well.

4. Location of tank batteries, production facilities, and production, gathering, and service lines. Existing tank batteries, production facilities, and production, gathering, or service lines within a one-mile radius of the proposed location which are owned or controlled by the lessee or operator should be shown on a map or plat of suitable scale. The type of each present facility and the exact nature of each existing line (oil flow line, gas gathering line, injection line, or water disposal line) should be identified and it should be noted which, if any, of said lines are buried. If new facilities (tank battery, other production equipment, and lines) are contemplated in the event production is

established and those facilities are to be located at other than on the well site itself, the map or plat furnished in this regard must also indicate the location of all proposed new facilities. The dimensions of these facilities, the proposed construction methods and materials, and the protective measures and devices to be employed to minimize hazards to livestock, waterfowl, and other wildlife will be stated. The approximate center locations of all production facility locations and the center lines of proposed gathering and service lines will be staked. A plan for rehabilitation of all disturbed areas no longer needed for operations and maintenance will also be submitted. Future prospects for additional development of the leasehold should be considered in the siting of new facilities. However, final approval to construct such new facilities will not be granted until after detailed plans have been submitted and evaluated pursuant to Section V. hereof.

5. Location and type of water supply (rivers, creeks, lakes, ponds, and wells). This information may be shown by quarter-quarter section on a plat or map of suitable scale or may be a written description. The source of all water to be used in drilling the proposed well must be noted if located on Federal or Indian land or if water is to be used from a Federal or Indian project. The method of transporting the water shall be stated, and any access roads crossing Federal or Indian land needed to haul the water will be described in item Nos. 1 or 2, as appropriate. However, the Survey's approval of the surface use and operations plan does not relieve the lessee or operator from obtaining any other authorization which may be required for the use of such water. Moreover, if a water supply well is to be drilled on the lease, it must be so stated under this item, and the District Engineer may require the filing of a separate application for permit to drill.

6. Source of construction materials. This information may be shown by quarter-quarter section on a plat or map of suitable scale or may be a written description. The proposed source (if located on Federal or Indian land), character, and use of all construction materials such as sand, gravel, stone, and soil material should be stated. Any access roads crossing Federal or Indian land needed to haul such materials should be described in item Nos. 1 or 2, as appropriate.

7. Methods for handling waste disposal. A brief, written description should be given of the methods and location proposed for safe containment and disposal of each type of waste material (cuttings, garbage, salts, chemicals, and sewage) which results from the drilling of the proposed well. Likewise, the narrative should include plans for the eventual disposal of drilling fluids and any produced oil or water recovered during testing operations.

8. Ancillary facilities. The plans or subsequent amendments to such plans shall identify all ancillary facilities such as camps and airstrips as to their location, land area required, and the methods and standards to be employed in their construction. Such facilities shall be shown on a map of suitable scale. The approximate center of proposed camps and the center line of airstrips shall be staked on the ground.

9. Well site layout. A plat of suitable scale (not less than 1 inch = 50 feet) including cross section diagrams of the drill pad showing all cuts and fills and the relation to topography are required. The plat should also include the proposed location of the mud tanks, pits (reserve, burn, and trash), pipe racks, access roads, turnaround areas, parking areas, living facilities, soil material stockpiles, and the orientation of the rig with respect to the pad and other faciities. Plans, if any, to line the reserve pit should be indicated.

   Until such time as the location is approved, it will be necessary to stake only the actual location of the well.

After approval and before construction commences, the exterior dimensions of the pad and reserve pit will be staked on the ground. The stakes should be appropriately marked to indicate proper cuts and fills to the dirt contractor.

10. Plans for restoration of the surface. State the proposed program for surface restoration upon completion of the operation such as determination of the reshaped topography, drainage system, segregation of spoils materials, surface manipulations, waste disposal, revegetation methods, soil treatments, and amendments, plus other practices necessary to rehabilitate all disturbed areas including any access roads no longer needed. Such plans will be reviewed for adequacy by the appropriate Federal surface management agency. A proposed timetable for the commencement and completion of rehabilitation operations must be provided.

11. Other information. Include a general description of the topography, soil characteristics, formation lithologies, geologic features, flora, fauna, and other aspects of the area such as other surface use activities. The surface ownership (Federal, Indian, State, or private) at the well location and for all lands which are to be crossed by newly constructed or upgraded roads should be indicated.

    Any other available information which is considered by the lessee or operator as being useful to the Geological Survey and Federal surface managing agency in evaluating the environmental impact of the proposed operation, including proximity to steep hillsides and gullies, water wells, ponds, lakes, or streams, occupied dwellings, or other facilities, and archeological, historical, or cultural sites, should be included.

    Information concerning required cuts and fills during the construction of roads and the location and all construction practices necessary to accommodate potential geologic hazards should be discussed under the appropriate items of the plan.

12. Lessee's or operator's representative. Include the name, address, and phone number of the lessee's or operator's field representative who is responsible for assuring compliance with the approved surface use and operations plan.

13. Certification. The following statement is to be incorporated in the plan and must be signed by the lessee's or operator's field representative who is identified in item No. 12 of the plan:

> I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by ______________________________ ______________ and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

______________ ______________________

Date Name and Title

IV. Environmental Analysis Requirements

If a preliminary inspection was not made prior to staking, an onsite inspection will normally be required following the filing of the application for permit to drill. If made, it will include representatives of the District Engineer, the lessee or operator, the Federal surface management agency, and such other interested parties as the lessee's or operator's dirt contractor. The purpose of this inspection will be to select the most feasible and environmentally acceptable areas for well sites (considering geologic factors and Federal and State regulations), access roads, and other proposed surface use areas. Accordingly, lessees and operators are encouraged to designate their future development or drilling sites so that several locations may be inspected at one time.

When such an inspection is made, an Environmental Analysis will usually be prepared by the office of the District Engineer. Said analysis will identify methods for mitigating the potential adverse environmental effects associated with the proposed operation and will be the basis of the approving official's determination as to whether approval of the proposed activity would constitute a major Federal action significantly affecting the quality of the human environment as defined by Section 102(2)(C) of the National Environmental Policy Act of 1969. Any surface protection and rehabilitation requirements specified by the Federal surface management agency will normally be made a part of any subsequently approved permit and/or the surface use and operations plan.

Due to the probability of an onsite inspection, the required input from other Federal agencies, and the variations in the level of drilling activity, lessees and operators are encouraged to file applications well in advance of the time when it is desired to commence operations.

V. Approval of Subsequent Operations

Before repairing, deepening, or conditioning a well, i.e., work that will involve change in the original or plugged back depth, casing arrangement, and/or present producing interval(s) including separation or commingling, a detailed written statement of the plan of work must be filed on Form 9-331A or 9-331C with the District Engineer and approval obtained before the work is started. Any proposed change in any such plan of work must also receive the prior approval of the District Engineer. Routine well work such as pump, rods, tubing and surface production equipment repairs will not require submittal of Form 9-331A unless specifically required by the District Engineer.

Lessees and operators are also required to submit for the approval of the District Engineer a suitable plan prior to undertaking any subsequent new construction, reconstruction, or alteration of existing facilities, including roads, dams, lines or other production facilities on any lease when additional surface disturbance will result. However, emergency repairs may be conducted without prior approval provided that prompt notification is provided to the District Engineer. Sufficient information must be submitted to permit a proper evaluation of the proposed surface disturbing activities as well as any planned accommodations necessary to mitigate potential adverse environmental effects.

The environmental analysis procedures discussed in Section IV. of this Notice will also apply to such subsequent operations which have the potential for significant surface disturbance although these requirements may be somewhat less in established producing areas.

VI. Agreement - Rehabilitation of Privately-Owned Surface

Where the surface is privately owned or is held in trust for Indian benefit, each application for permit to drill or to conduct other surface disturbance activities, shall contain information concerning the private surface owner's or Indian rehabilitation requirements. A written agreement between the lessee or operator and the surface owner is not necessary if a letter from the lessee or the operator setting forth the surface owner's rehabilitation requirements is furnished. In those cases where it is impossible or impractical to obtain the private surface owner's or Indian rehabilitation requirements, a letter from the lessee or operator describing the situation will be acceptable. Payment of damages in lieu of full restoration will not be an acceptable substitute for a normal cleanup and rehabilitation program.

If no arrangements have been made, or if information concerning such arrangements is not furnished, the District Engineer will request the appropriate Federal agency to recommend the necessary surface restoration requirements. In such cases, the lessee or operator will be expected to comply with these rehabilitation requirements, if any, regardless of the arrangement made with the surface owner. Provided, however, that subsequent reasonable requests by the surface owner that pits, roads, and other facilities be left intact may be honored. If written proof of prior arrangements has been provided, the appropriate Federal agency will be asked to recommend surface rehabilitation requirements to the District Engineer giving full consideration to the preferences of the landowner.

VII. Well Abandonment

No well abandonment operations may be commenced in the absence of the prior approval of the District Engineer. In the case of newly drilled dry holes or failures and in emergency situations, oral approval may be obtained from the District Engineer subject to confirmation by written application. For existing wells not having an approved surface use plan, a sketch showing the disturbed area and roads to be abandoned along with rehabilitation plans must be submitted with the application. However, the Federal surface management agency may request additional surface rehabilitation measures at abandonment and, these requirements are normally made a part of the Geological Survey's approval of abandonment. Upon completion of the abandonment and rehabilitation operations, the lessee or operator should notify the District Engineer that the location is ready for inspection usually via an additional Sundry Notice. Final abandonment will not be approved until the surface rehabilitation work required by the drilling permit or abandonment notice has been completed and the required vegetation is established to the satisfaction of the appropriate Federal surface management agency.

VIII. Water Well Conversion

The complete abandonment of a well which has encountered usable fresh water will not be approved if the Federal surface management agency wants to acquire the well. If, at abandonment, the Federal surface management agency elects to assume further responsibility for the well, it will reimburse the lessee or operator for the cost of any recoverable casing or well head equipment which it requests to be left in or on the hole solely because it is to be completed as a water well. The lessee or operator will abandon the well to the base of the deepest fresh water zone of interest as required by the District Engineer and will complete the surface cleanup and rehabilitation as required by the drilling permit or abandonment notice immediately upon completion of the conversion operations.

JUN 1 1976
Date

Oil and Gas Supervisor

Mid-Continent Area

Approved:

Russell G. Wayland
Russell G. Wayland
Chief, Conservation Division

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Beaverhead National Forest

REPLY TO: 2820 Leases and Permits
2630 Habitat

August 2, 1979

SUBJECT: Oil and Gas Leasing

TO: Forest Supervisor

Three endangered, and one threatened species of wildlife occur on the Beaverhead. However, the bald eagle and gray wolf are the only species that might occur within areas currently designated for oil and gas leasing.

The bald eagle occurs in the Lower Ruby River area during the winter season, from about December 1, to March 15. This winter population of bald eagles is transient along the river from approximately the Forest boundary to the town of Twin Bridges. Considering their close association with human activity in this area all winter, no impact on this species as a result of oil and gas leasing, or preliminary exploration, is anticipated.

Regarding wolves, oil and gas leases do not contain wolf rendezvous sites, specific elk calving sites, or elk winter ranges, except in the Maiden Peak area. As such, with the exception of this area, oil and gas leasing and preliminary exploration is expected to not affect this species. In the Maiden Peak area, if oil and gas is discovered in commercial quantities where wildcat drilling is foreseeable, a formal consultation with the U.S. Fish and Wildlife Service may be required.

Chuck Sundstrom
CHARLES SUNDSTROM
Wildlife Biologist

APPENDIX F

Procedures for Consultation with Fish and Wildlife Service on Endangered and Threatened Species[1]

The consultation procedures for oil and gas leasing and subsequent activities between Region 1 of the Forest Service and Region 6 of the Fish and Wildlife Service are outlined below:

A. Outside of Identified Essential Habitat

1. The Forest Service completes a competent review (evaluation) of the project's potential to affect a listed species or its habitat.

a. The Fish and Wildlife Service, at the discretion of the Forest involved, may or may not be involved at this stage.

b. The competent review will determine whether or not a listed species or its habitat may be affected and, therefore, whether or not formal consultation should be initiated.

c. The competent review should be documented in the project EA (or files if the EA has been previously completed).

2. The project EA or competent review should state the extent of project actions currently being assessed and the next point at which an EA and/or competent review will be undertaken.

3. If the competent review determines that formal consultation is not required, the project proceeds to the next phase. The lease/permit is granted with appropriate stipulations to safeguard wildlife and other resources.

B. Within Occupied or Essential Habitat

1. The Forest Service completes a competent review of the project.

a. The Forest Service should engage in informal consultation with the Fish and Wildlife Service and appropriate State agencies during the competent review process.

b. The competent review is documented in the project EA (or files).

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[1] The source of this procedure is 2630, 2820, R-1 Memo dated July 16, 1979.

2. If the competent review indicates a "may affect" situation does not occur:

   a. Issue the lease/permit with appropriate stipulations to protect wildlife and other resources.

   b. Clearly state in the lease/permit that the area involved (or a portion thereof) is within essential habitat and endangered and threatened species concerns may preclude, modify, or restrict future activities.

   c. Clearly state in the EA, competent review, and lease/permit the project actions authorized and the next checkpoint at which a project EA and/or competent review will occur.

3. If the competent review indicates a "may effect" situation exists:

   a. Initiate formal consultation with the Fish and Wildlife Service.

   b. Pending a biological opinion rendered by the Fish and Wildlife Service, make no irreversible or irretrievable commitment of resources which will foreclose the formulation or implementation of any reasonable and prudent alternatives which would avoid jeopardizing the continued existence of any endangered or threatened species or adverse modification or destruction of its critical (essential) habitat.

   c. Based on the outcome of the biological opinion:

      (1) Non-jeopardy Biological Opinion--Issue the lease/permit with appropriate stipulations and a clear statement of the potential for future restrictions on subsequent activities in the event conflicts occur with the endangered or threatened species.

      (2) Jeopardy Biological Opinion--Refuse the lease/permit application with reference to the Biological Opinion:

         (a) If the Forest Service believes the Biological Opinion is in error, or relative information was not considered, a request for reinitiation of consultation may be made.

(b) If the Forest Service or lease applicant wishes the project to proceed in spite of a Jeopardy Opinion, application for exemption may be made under Section VII(g) of the Endangered Species Act. A Forest Service application for exemption must be made through the Chief's Office.

EDWARD R. SCHNEEGAS
Director Wildlife and Fisheries

Appendix G

Broad Application of "Lease Evaluation Procedure"

On the following pages in this appendix are tables showing how lease applications and leases will be affected by some concerns identified in this environmental analysis.

Following is an explanation of the tables.

Column A -- This is the identification number assigned by the Bureau of Land Management to leases and lease applications.

Column B -- Total acres contained by a lease or lease application.

Column C -- The number "22" means that the acreage in Column "B" is in a lease application; the number "23" means the acreage in Column "B" has been leased (with a no-surface occupancy stipulation).

The numbered columns represent the concerns being evaluated. They are numbered in the same sequence as the concerns listed in the Lease Evaluation Procedure. Ratings have been determined in each column opposite each lease. The ratings are expressed as L (light), M (moderate), and E (extnesive). "L" means that 1 to 20 percent of the acreage shown in Column "B" have been determined to be affected by the concern being rated. Similarly, "M" means 21 to 50 percent are affected; and "E" means 51 to 100 percent. A blank means no area has been identified as affected. All of the concerns are not represented in the tables in this appendix (when compared with the Lease Evaluation Procedure). The reason for this is explained below along with some explanatory notes for those that are displayed:

1. WILDERNESS -- Not shown on table because there are no leases or applications now on file within wilderness.

2. PROPOSED WILDERNESS -- Shown on table.

3. FURTHER PLANNING -- Shown on table.

4. FISHERIES MANAGEMENT UNIT -- Not shown in table because the concern is localized to a few leases along the Ruby River.

5. ROADLESS MANAGEMENT -- Shown in table.

6. THREATENED AND ENDANGERED SPECIES (T & E Species) -- Shown in table.
   Note: The table shows where a habitat has been identified, but there is a concern on every lease in the sense that each lease will be attended by a special stipulation insuring protection of threatened and endangered species should additional habitat be recognized.

7. BIG GAME WINTER RANGE -- Shown in table.

8. CULTURAL VALUES -- Not shown on table because of the difficulty in making general judgments over extensive areas. Cultural values are

site specific and must be evaluated on a lease-by-lease basis. While many leases may be affected, it is judged that the number of acres affected will be low. Consequently, when the concern is mitigated only a small portion of a given lease is likely to be affected.

9. VISUAL RESOURCE

   a. Roads and trails -- Shown in table.

   b. & c. -- Not shown in table because of the difficulty in making general judgments about the visual resource over extensive areas. These visual resource concerns must be evaluated on a lease-by-lease basis. There are many leases which will be affected, particularly by "9c". It is judged that generally the concern can be mitigated without the use of a no-surface occupancy stipulation (see Lease Evaluation Procedure).

10. WATER -- Not shown in table because of the impracticality of compiling the acreage on a broad scale. Most leases and lease application areas are likely to contain one or more streams or other water bodies. The percentage of a lease affected will vary widely.

11. GRAZING -- Not shown because the standard stipulations will usually provide adequate protection.

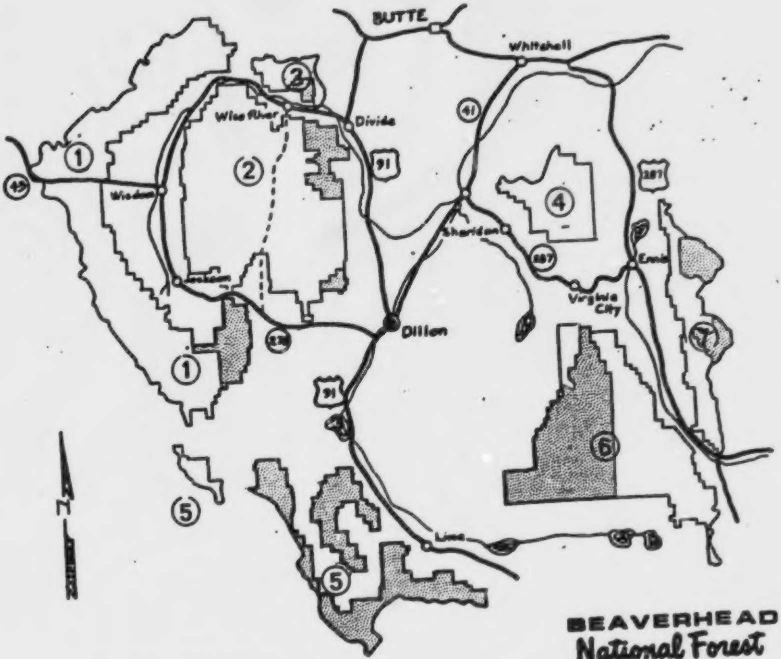
12. EXISTING RIGHTS -- Not shown because the standard stipulations will usually provide adequate protection.

13. SOIL RESOURCE -- Shown in table.

14. OTHER CONCERNS -- Not shown in table because the concerns will not be identified until lease-by-lease evaluations are made.

The computer printouts in this appendix are listed by planning units. In order to give the reader a reference to the ground, a map of the planning unit is also displayed.

Note: There are no leases or lease applications in Tobacco Roots Planning Unit No. 4.


BUTTE
Whitehall
Wise River
Divide
Wisdom
Jackson
Sheridan
Virginia City
Ennis
Dillon
Lima
43
41
91
287
278
①
②
③
④
⑤
⑥
⑦
N
BEAVERHEAD
National Forest
montana

PLANNING UNIT

I	WEST BIG HOLE
2	PIONEER
3	FLEECER
4	TOBACCO ROOT
5	LIMA
6	GRAVELLY
7	MADISON

PLANNING UNITS

SOME MAJOR CONCERNS FOR WEST BIG HOLE PLANNING UNIT NUMBER I

								9a		13 Soil Resource			
A	B	C	2	3	5	6	7			a	b	c	d
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTH PLANNING	ROADLESS MGMT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SLOPES OVER 65%	LAND TYPES	L.T. AND SLOPES 35%	COMPACTION
153-038110	0640.00	22				E			L	M			
153-038111	1240.00	22				E				L	L		
153-038467	1897.00	22				E				L			
153-038468	2010.00	22			M	E			L	M	L		
153-038469	2019.00	22				E				L			
153-038470	2560.00	22				E				M	L		
153-038471	2560.00	22				E			L	L			
153-038472	2560.00	22				E			L	M			
153-038473	1280.00	22				E				M			
153-038474	1360.00	22				E				L			
153-038475	0560.00	22				E				L			
153-038476	2233.09	22				E				L		L	
153-038477	1929.25	22				E				M			
153-038478	1852.43	22				E		L		L	L		
153-038479	1918.02	22				E				L			
153-038480	1273.54	22						L		L			
153-038481	2512.50	22				E				M			
153-038482	2560.00	22				E				L			
153-038483	2560.00	22				E					L		
153-038484	1920.00	22									L		
153-038485	1133.99	22									L		
153-040381	2504.64	22						L			L	L	
153-040382	2560.00	22						L		L			
153-040383	2509.76	22			L					L			
153-040384	2560.00	22			L			L	L	L	L	L	
153-040385	2457.50	22						L	L	L			
153-040386	1920.00	22						M	L				
153-040387	2391.44	22						L	L	L			
153-040388	1862.50	22							L	L			

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SOME MAJOR CONCERNS FOR PIONEER PLANNING UNIT NUMBER 2

A	B	C	2	3	5	6	7	9a		13 Soil Resource			
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTH PLANNING	ROADLESS MGMT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	a SLOPES OVER 65%	b LAND TYPES	c L.T. AND SLOPES 35%	d COMPACTION
153-032472	1600.00	23				E				L			
153-032473	2276.05	22				E		L		L			
153-032474	2144.65	23				E		L		L			
153-032475	2406.23	23			L	E		L	L	L			
153-032476	1600.00	23			M	E		L		M			
153-032478	2500.00	23								L			
153-032479	1920.00	23			M	E				L			
153-032480	1520.00	22			E					M			
153-032481	1556.80	22			M		M			L			
153-033100	2524.65	23					L	L		L			
153-033107	0960.00	23				E		L					
153-033326	0156.40	23					E			M			
153-033913	1308.52	23						L					
153-034005	1280.00	22											
153-034545	0640.00	22				E							
153-034546	1929.36	22				E				M			
153-034594	2557.36	22			L	E				L		L	
153-034806	1837.03	22				E		L		M			
153-034948	2440.61	22				E	M	L		L			
153-034949	2565.16	22				E		L		L			
153-034950	2551.95	22				E		L		L		L	
153-034951	1275.00	22						L		L		L	
153-034952	0640.00	22				E		L		L			
153-035173	2025.76	22						L					
153-035174	1920.00	22								L			
153-038128	0640.00	22				E	L	L	L				
153-038129	0640.00	22				E		L					
153-038133	0640.00	22	E			E				L			
153-038139	2345.12	22						L					
153-038404	1646.06	22						L		M			
153-038405	1907.39	22						L		L			
153-038406	1280.00	22				E	E		L				
153-038928	0160.00	22											
153-040343	0217.52	22											

SOME MAJOR CONCERNS FOR FLEECER PLANNING UNIT NUMBER 3

A	B	C	2	3	5	6	7	9a		Soil Resource			
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTH PLANNING	ROADLESS MGMT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	a SLOPES OVER 65%	b LAND TYPES	c L.T. AND SLOPES 35%	d COMPACTION
153-032482	2453.00	23						L	L	L			
153-032483	2507.00	22						L	L	L	L		
153-032530	1106.00	22						M		L			
[illegible]	[illegible]	22								L			

SOME MAJOR CONCERNS FOR LIKA PLANNING UNIT NUMBER 5

A	B	C	2	3	5	6	7	9a		13 Soil Resource			
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTH PLANNING	ROADLESS MGMT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SLOPES OVER 65%	LAND TYPES	L.T. AND SLOPES 35%	COMPACTION
153-028117	2560.00	23				E	L						
153-028118	2284.52	22				E	M	L				L	
153-029592	2560.00	23				E			L	L	L	L	
153-029594	2590.00	23			E	E			L	M			
153-029595	2560.00	23			L	E			L	L			
153-029596	2560.00	23				E			L	M			
153-029597	1592.35	23				E			L	L			
153-029598	1018.49	23			M	E			L		L		
153-029599	1711.87	23				E			L	L			
153-029600	2198.34	23				E			L	L			
153-029615	2573.26	23				E				L			
153-029616	0645.80	23				E						L	
153-029617	1279.69	23				E							
153-029620	2545.32	23				E				E		L	
153-029621	2560.00	23				E			L	M			
153-030357	0080.00	23				E				E			
153-033489	1920.00	22				E		L		L			
153-033490	2558.44	23				E		L		L		L	
153-033491	0600.00	22				E						L	
153-033495	1920.00	22				E				L			
153-033497	0640.00	22				E				L			
153-033498	2569.40	23				E				L			
153-033499	2197.84	22				E			L	L			
153-033500	0075.00	22				E		E					
153-033501	1280.00	22				E							
153-033502	2360.00	23				E		L		L		L	L
153-033504	2140.00	22				E		L	L	L		L	
153-033505	2560.00	23				E				L	L		L
153-033506	1280.00	22				E				L	L		
153-033509	1670.62	23				E		L					
153-033731	2266.95	23				E	M	L		M	L		L
153-033732	2550.36	23				E	M			L	L	L	
153-033733	2551.44	23				E	M			L	L		
153-033734	2552.60	23				E	M	L		M			
153-033735	1906.72	23				E		L		L			
153-033736	2480.00	23			M	E		L		M		L	L
153-033739	2572.84	23				E				E			
153-033740	2216.94	23				E				L			
153-033741	1867.80	23				E		L	L	M			

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SOME MAJOR CONCERNS FOR LIMA PLANNING UNIT NUMBER 5

A	B	C	2	3	5	6	7	9a		13 Soil Resource a	b	c	d
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTHER PLANNING	ROADLESS CONT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SLOPES OVER 65%	LANDTYPES	L.T. AND SLOPES 35%>	COMPACTION
153-033742	1920.00	23				E		L	L	M			
153-033743	1920.00	23				E			L	M			
153-033749	2361.39	23				E	E	L		L	L	L	
153-033750	2135.41	23			L	E	E	L		L			
153-033751	2563.92	23			L	E	E	L					
153-033752	1321.01	23			L	E			L				
153-033756	2269.67	23				E		L		M			
153-033757	1919.00	23				E		L	L	L			
153-033758	2560.00	23				E			L	E			
153-033764	1920.00	23				E				M			L
153-033765	2560.00	23				E			L	L			
153-033766	2560.00	23				E			L	L			
153-033801	1920.00	23				E			L	M		L	L
153-033802	1280.00	23				E			L	L		L	M
153-033908	2556.98	23			L	E		L		M			
153-033909	2560.00	23				E				M		L	
153-033910	2560.00	23			E	E			L	L		L	
153-033911	1496.41	23			E	E			L				
153-033925	1280.00	23				E			L	L			
153-033926	2560.00	23				E			L	M			
153-033927	2560.00	23				E			L	M			
153-033928	1920.00	23				E				L		L	
153-034579	0960.00	22				E			L	L	M		M
153-034977	0640.00	22				E				L		L	
153-034978	0640.00	22				E						M	
153-034979	0640.00	22				E			L	L		L	
153-035009	1670.62	23				E			L	L	L		L
153-035010	0640.00	23				E				M	L		L
153-035215	2958.80	22				E			L	L		L	
153-035216	2560.00	22				E				L		L	M
153-035217	2560.00	22				E		L	L	M		L	M
153-035218	2560.00	22			E	E			L				
153-035925	0160.00	22				E			M				
153-035926	0118.45	22				E		L		M		L	M
153-037765	1920.00	22				E		L	L	M		L	M
153-037766	1890.56	23				E			L	M			
153-038101	1744.47	22			M	E		L		L			
153-038102	1280.00	22			L	E			L	L			
153-038103	1920.00	22			M	E			L	M			
153-038104	2113.27	22				E			L	E			
153-038105	1335.22	22				E				L		L	
153-038106	2560.00	22				E			L	L			
153-038107	2474.00	22				E				L		L	
153-038108	2560.00	22				E			L		L		
153-038109	2423.06	22				E				M		L	
153-038112	2560.00	22				E	L			L		L	
153-038113	2240.00	22				E	L	L					
153-038114	2324.64	22				E	L			L		L	

SOME MAJOR CONCERNS FOR LIMA PLANNING UNIT NUMBER 5

A	B	C	2	3	5	6	7	9a		13 Soil Resource a	b	c	d
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTH PLANNING	ROADLESS MGMT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SLOPES OVER 65%	LAND-TYPES	L.T. AND SLOPES 35%>	COMPACTION
153-038117	1945.21	22				E							
153-038118	0960.00	22				E				L			
153-038119	1241.00	22				E			L	L			
153-038120	1440.00	22				E			L	L			
153-038121	2036.00	22				E				E			
153-038122	2280.00	22				E			L	M			
153-038123	0640.00	22				E			L	L			
153-038124	0640.00	22				E				E			
153-038126	2403.00	22				E				E			
153-038127	0430.00	22				E			L	L		L	
153-038135	1881.52	22				E							
153-038136	2560.00	22				E				L			
153-038137	1200.00	22				E		L		L			
153-038138	2123.00	22				E		L		L			
153-038537	2557.00	22		L		E				L			
153-038538	2561.00	22				E			L	L		L	
153-038539	2547.00	22		M		E			L	L		L	
153-038540	2569.00	22		E		E			L	M	L		
153-038541	2560.00	22		E		E			L	M		L	
153-038542	2216.00	22		E		E			L	M			
153-038543	2524.15	22				E			L	M			
153-038544	2560.00	22				E				L		L	
153-038545	2560.00	22		M		E			L	L	L		
153-038546	2560.00	22		M		E			L	M			
153-038547	2527.46	22		E		E			L	M			
153-038548	2189.64	22		M		E			L	M			
153-038549	2556.00	22				E			L	E			
153-038550	2457.00	22				E			L	M	L		
153-038551	2394.74	22				E			L	L			
153-039482	1249.11	23				E			L	L			
153-039483	1840.00	23				E		L		L			
153-039484	0330.62	23				E		L	L	L			
153-041112	1944.00	22				E							
153-041113	2548.59	22				E				L			
153-041114	2529.94	22				E			L	L			
153-041115	2573.28	22				E				M			
153-041116	2560.00	22				E				E			
153-041117	0640.00	22				E				L			

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SOME MAJOR CONCERNS FOR GRAVELLY PLANNING UNIT NUMBER 6

A	B	C	2	3	5	6	7	9a		13 Soil Resource			
										a	b	c	d
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTH PLANNING	ROADLESS MGMT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SLOPES OVER 65%	LANDTYPES	L.T. AND SLOPES 35%>	COMPACTION
153-010729	0120.00	22				E		L		L		L	E
153-010756	0640.00	22				E							
153-010789	1308.00	23				E		M					
153-020760	0640.00	23				E		M					E
153-032128	1601.12	23				E	E	L				L	
153-032129	1609.11	23				E		L		L		L	
153-032130	2400.00	23				E	E	L					
153-033292	0132.50	22				E	E	M		L			
153-033327	2560.00	23				E							E
153-033328	2560.00	23				E						L	
153-033329	1891.44	23				E						L	M
153-033330	2314.42	23			M	E		M	L				M
153-033331	2525.72	23			L	E		L	L				E
153-033332	2518.79	23			M	E		L					M
153-033333	1920.00	23				E		L				L	M
153-033335	2560.00	23				E			L	L			L
153-033336	2538.88	23				E		L	L	L			
153-033337	0640.00	23				E		L				L	E
153-033338	2582.00	23				E		L				L	
153-033339	2593.00	23				E		L					E
3-033340-*	2582.00	23				E		L				L	M
153-033341	2529.40	23				E						L	E
153-033342	2560.00	23				E		L				M	E
153-033343	2582.00	23				E		L				L	
153-033353	1286.00	23				E		L					E
153-033399	1280.00	23				E		M				M	
153-033403	1920.00	23				E		L		L		L	
153-033404	0775.00	23				E						M	
153-033406	0775.00	23				E		M				L	
153-033407	1440.00	23				E		L				L	
153-033409	1382.72	23				E						M	E
153-033410	1920.00	23				E		L				M	E
153-033411	1920.00	23			L	E			L	L		L	
153-033412	2564.40	23			E	E			L	M		L	
153-033413	2553.12	23			E	E			L	M		L	
153-033414	2560.00	23				E			L	L		L	
153-033415	2492.20	23			L	E	L		L	L			
153-033657	1542.16	23				E	M	L				M	E
153-033691	2560.00	22			E	E		L	L	M		L	

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SOME MAJOR CONCERNS FOR GRAVELLY PLANNING UNIT NUMBER 6

A IDENTIFICATION NUMBER	B ACRES	C STATUS	2 PROPOSED WILDERNESS	3 FURTH PLANNING	5 ROADLESS MGMT.	6 T & E SPECIES	7 BIG GAME WINTER	9a VISUAL RESOURCE -ROADS-	9a VISUAL RESOURCE -TRAILS-	13 Soil Resource a SLOPES OVER 65%	13 Soil Resource b LANDTYPES	13 Soil Resource c L.T. AND SLOPES 35%>	13 Soil Resource d COMPACTION
153-033930	1920.00	23			L	F		L		L		L	
153-033931	1996.00	23			M	E		L		L		L	
153-034108	1948.00	23			M	E		L		L		L	
153-034203	2560.00	22				E		L				L	E
153-034204	2560.00	22				E		L					
153-034205	2560.00	22				E		L				L	
153-034206	2560.00	22				E		M					E
153-034207	2560.00	22				E		L		L		L	
153-034208	2560.00	22				E				L		M	E
153-034461	2560.00	22			E	E			L	L		L	
153-034462	2560.00	22			E	E			L	M		L	
153-034463	2560.00	22			E	E	L		L	M		L	
153-034484	2526.04	22			E	E	L	L	L	M			
153-034528	2560.00	22				E			L	L			
153-034558	2465.00	22			M	E			L	L	M		
153-034945	2309.20	22			L	E				L		L	
153-034946	1960.00	22				E		L		L			
153-034947	0686.00	22				E				M			
153-034991	1630.00	23				E	E	L		L		L	
153-035003	2542.27	23			L	E	E			L		L	
153-035004	2095.55	23			M	E		L	L				
153-035028	2560.00	23			M	E				L		L	
153-035167	2489.00	22				E						L	
153-035168	2455.00	22				E		L		L		L	
153-035169	2511.00	22				E		L				L	
153-035170	2204.00	22			L	E		L		L		L	
153-035171	2155.00	22				E		L				L	
153-035172	2503.12	22				E		L				L	
153-035177	1309.20	22			E	E			L	L			
153-038098	1520.00	22				E			L	L		L	
153-038099	2482.00	22				E		L				L	
153-038100	2537.00	22				E		L		L		L	
153-038422	2441.32	22			L	E		L	L	L		L	
153-038462	2550.00	22				E		L				L	M
153-038463	0640.00	22			E	E				E			
153-038508	0972.17	22			M	E				M			
153-038575	2574.00	22			E	E			L	M			
153-038576	2564.00	22				E		M	L				
153-038577	2564.00	22				E		L	L	L		L	E
153-038578	2560.00	22			L	E		L	L			L	E
153-038579	2569.00	22				E						L	E
153-038580	1929.00	22				E				L			
153-038616	0965.23	22			E	E				M		L	
153-038891	1290.00	23			E	E	M	M		L		L	M
153-038892	2559.60	23			L	E			L	L			
153-038893	2511.95	23			E	E			L	M			
153-038894	1436.54	23			E	E	M	L		L		L	
153-038895	1440.00	23				E		L				L	M
153-038896	2560.00	23			M	E	M	L		L			
153-038897	2560.00	23				E	M	L				L	E

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SOME MAJOR CONCERNS FOR GRAVELLY PLANNING UNIT NUMBER 8

A	B	C	2	3	5	6	7	9a		13 Soil Resource			
										a	b	c	d
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTH PLANNING	ROADLESS MGMT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SLOPES OVER 65%	LAND-TYPES	L.T. AND SLOPES 35%>	[illegible]
153-038908	2560.00	22				E		L		L			
153-038969	2560.00	22				E		L		L			
153-039454	1131.00	23				E						L	
153-039455	1920.00	23				E		L		L		L	
153-039456	0722.00	23				E				L		M	E
153-039457	0400.00	23				E				L			
153-039458	0678.85	23				E	E	L		L			
153-039459	1120.00	23				E		L		L		L	E
153-039460	1789.48	23				E						M	E
153-039461	1240.00	23				E						M	E
153-039462	0640.00	23				E							M
153-039463	2485.06	23			L	E		L	L				L
153-039464	2484.68	23				E		L	L	L			
153-039465	2461.56	23				E		L	L	L		L	
153-039466	2560.00	23				E		L	L				M
153-039467	2560.00	23			E	E			L	L			
153-039468	2521.76	23			E	E			L			L	
153-039469	2560.00	23				E		L	L				F
153-039470	2560.00	23				E		L	L	L		L	
153-039471	2522.12	23				E			L			L	
153-039472	2553.81	23			E	E			L	L		L	
153-039473	2568.04	23			E	E			L	M		L	
153-039474	2279.75	23			L	E			L			L	
153-039475	2560.00	23			E	E			L	L		L	
153-039476	2560.00	23			E	E			L	L			
153-039477	2260.56	23			L	E		L	L	L			
153-039478	2560.00	23			E	E			L	L			
153-039479	2560.00	23			M	E			L		L		
153-039481	1280.00	23				E			L	L	L		
153-043110	0320.00	22			E	E				M		L	
153-043111	0800.00	22			L	E						L	

SOME MAJOR CONCERNS FOR MADISON PLANNING UNIT NUMBER 7

A	B	C	2	3	5	6	7	9a		13 Soil Resource			
										a	b	c	d
IDENTIFICATION NUMBER	ACRES	STATUS	PROPOSED WILDERNESS	FURTH PLANNING	ROADLESS MGMT.	T & E SPECIES	BIG GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SLOPES OVER 65%	LAND TYPES	L.T. AND SLOPES 35%	COMPAC TI
153-035867	1280.00	22		E					L	L			
153-035868	2560.00	22		E					L	L		L	
153-038140	1000.00	22		E					L	L		L	
153-038141	2560.00	22		E					L	L			
153-038142	0960.00	22		E					L			L	
153-038435	2514.46	22		E				L	L	L		L	
153-038436	1560.00	22		E						M		L	
153-038437	1921.33	22		E				L	L	M		L	
153-038438	1519.44	22		E					L			L	
153-038439	2576.16	22		E					L	L			
153-038440	0640.00	22		E						L			
153-038441	1280.00	22		E					L	L			
153-038442	0880.00	22		E					L				
153-038444	1760.00	22		E					L				
153-038445	0746.76	22		E									

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October 21, 1985

TO : Honorable John Seiberling
Chairman, Subcommittee on Public Lands
Attention: Loretta Neumann

FROM : Susan Abbasi
Specialist in Natural Resources Policy

M. Lynne Corn
Analyst in Natural Resources Policy
Environment and Natural Resources Policy Division

SUBJECT : Issues Surrounding the Greater Yellowstone Ecosystem

Enclosed is the report you requested on issues surrounding the Greater Yellowstone Ecosystem. It includes a number of maps and tables which are gathered at the end of the report. A Table of Contents is also included. Please feel free to contact either of us or any of those who worked in the preparation of the report for additional information.

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ISSUES SURROUNDING THE GREATER YELLOWSTONE ECOSYSTEM: A BRIEF REVIEW

by
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October 17, 1985

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EXECUTIVE SUMMARY

Yellowstone National Park was created in 1872 to preserve the unique natural resources of the area, but the boundaries were generally established along legal, rather than ecological, lines. As a result, many of the resources, such as wildlife and water, move across Park boundaries onto the surrounding Federal and private lands. This broader area has come to be known as the "Greater Yellowstone Ecosystem," and is loosely defined as the high, mountainous region centered around the Park and surrounded by dry plains.

The National Park Service, the Fish and Wildlife Service, and the Forest Service manage about 90 percent of the lands in the Yellowstone Ecosystem. Each agency manages its lands for differing purposes: National Parks are managed for preservation and recreation; National Wildlife Refuges are managed for wildlife; while National Forests are managed for many uses, including timber, grazing, energy and minerals, recreation, and fish and wildlife. These differing management purposes at times result in conflicts among various resources and users.

Wildlife is part of Yellowstone's charm, and it is the resource most affected by other uses. Conflicts over grizzly bears are perhaps the most publicized, because (1) grizzlies are threatened, (2) human-grizzly interactions may lead to death (mostly for the bear), and (3) because grizzlies generally avoid areas used by humans, increasing recreation and development tend to reduce grizzly habitat. Yellowstone's elk may come into conflict with recreational and other developments if migration routes or winter habitat are restricted; elk can also damage crops and some developments, and can spread disease to livestock. The needs of endangered bald eagles may also conflict with other uses. Much of their prime habitat is private land around Jackson

Hole and the Snake River that is subject to development pressures; siltation resulting from construction can damage spawning areas for cutthroat trout, a major food source for bald eagles.

Recreation is a major industry in the Greater Yellowstone Ecosystem; recent increases are primarily in winter activities. Recreation may conflict with wildlife needs by increasing human presence and development. It can also conflict with other types of development, such as timber harvesting and oil drilling, which can affect the aesthetics of the area. Wilderness designation in the area has protected some resource values while limiting the expansion of others.

Timber harvest in the surrounding National Forests provides for about 900 direct jobs in the area. Timber sale prices range from $3 to $50 per thousand board feet (Mbf). Forest Service costs for preparing the sales vary from $30 to $70/Mbf.

Confusing geology, expensive mitigation requirements, and congressional restrictions in the Yellowstone Ecosystem have kept interest in developing oil, gas, and geothermal leases low. Geothermal interest is greatest west of the Park; effects of such development on the Park's resources are not clear. The Bureau of Land Management is postponing development until Congress resolves the issue.

ISSUES SURROUNDING THE GREATER YELLOWSTONE ECOSYSTEM

INTRODUCTION

When Yellowstone National Park was set aside in 1872, it was intended to preserve the unique natural resources of the area. However, the boundaries of the Park follow legal, rather than ecological lines, and very few of its boundaries follow natural demarcations such as ridge tops or rivers. As a result, with growing interest in resources such as wildlife and water that move across the artificial Park boundaries, the physical ecosystem that the plants and animals depend on has come to be known as the "Greater Yellowstone Ecosystem." The Ecosystem (an ecological rather than a legal designation), with Yellowstone National Park at its heart, constitutes an ecological "island" surrounded by areas of lower elevation with less rainfall.

Animals and plants in this Ecosystem have distributions that straddle the boundaries of two National Parks, five or more National Forests, two or more National Wildlife Refuges (NWR), some land managed by the Bureau of Land Management (BLM), and several thousand acres of private land. (See table 1 and map 1.) Because the various species themselves have different distributions, a precise drawing of boundaries for the Ecosystem may not be possible: a person interested primarily in grizzly bears would probably not draw the same Ecosystem boundaries as a person interested primarily in bald eagles. Rather, as more and more distributions become known, consensus may develop on those general areas of significance to a complex of many species. Map 2 shows two different versions of the Ecosystem's boundaries.

This report will outline: (1) the unique features of the area; (2) the roles of the federal land management agencies in the area; (3) wildlife issues;

(4) recreational use; (5) wilderness designation in the area; and (6) commercial use of lands adjacent to the park.

UNIQUE CHARACTERISTICS OF THE GREATER YELLOWSTONE AREA

Physical Features

The Yellowstone area is an identifiable land form, distinct from the surrounding area. 1/ It is characterized by a high elevation plateau (generally over 7,500 feet), centered in Yellowstone National Park, nearly surrounded by very high, rugged mountains (see map 3). Grand Teton Peak in Grand Teton National Park is the highest mountain in the area, at 13,747 feet, but more than 40 peaks in and around Yellowstone Park exceed 10,000 feet. The area surrounding the Greater Yellowstone Ecosystem is dominated by lower elevation plains (under 6,000 feet), dotted with hills and low mountains. The Greater Yellowstone area is, in effect, an island of mountains in the high, dry plains of the West.

Two high mountain ridges extend south from the Yellowstone area -- the Wind River Range and the Salt River (or Wyoming) Range. These ridges are less important to the Ecosystem because of their distance from the central plateau; further, because these ridges separate river valleys, they are more similar to other western mountain ranges, such as the Bighorns farther east and the Uintas farther south. Thus, descriptions of the Greater Yellowstone Ecosystem typically exclude the Wind River and Salt River Ranges.

1/ U.S. Department of the Interior, Geological Survey. The National Atlas of the United States of America. Washington, 1970. p. 62.

Hydrology

The high plateau and mountains receive more than twice as much precipitation as the surrounding plains. Annual snowfall exceeds 6 feet (about 6 inches of precipitation) throughout most of the area, while the plains generally receive less than 3 feet of snow (3 inches of precipitation) annually. Total precipitation in the area, including snowfall, averages more than 32 inches per year, while the surrounding plains average less than 16 inches of precipitation annually. As a result, the Greater Yellowstone area is the headwaters for the Snake River, the Green River (which flows through Flaming Gorge to the Colorado River), and numerous tributaries of the Missouri River (most notably the Yellowstone River).

The most famous features of Yellowstone are probably the geysers and hot springs in the Park. While other places also have geysers -- notably Iceland and New Zealand -- none can match the size, power, or number of geysers in Yellowstone National Park. The sources of groundwater for Yellowstone's geysers are still under investigation. Recent news reports state that the U.S. Geological Survey laboratory in Menlo Park, California, now suspects that the water comes from aquifers north of the Park, particularly in the Gallatin National Forest. 2/ The valleys of several Missouri River tributaries north of the Park have long been suspected of being recharge areas for groundwater, but there is still no published evidence linking these areas with the Yellowstone geysers.

Red Rock Lakes are often included when the Yellowstone Ecosystem is discussed. These lakes are located about 30 miles west of Yellowstone Park, near the Continental Divide. They are not in the central plateau or the

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2/ James Coates. Mining Projects Tap into Controversy at Yellowstone. Chicago Tribune. August 25, 1985. Section 1, p. 4.

surrounding mountains, but are often included because the warm springs in the area are probably linked to Yellowstone's natural geothermal activity and because the lakes are heavily used by the wildlife of the central plateau.

Vegetation

The higher elevations and greater precipitation in the central plateau and surrounding mountains cause the vegetation in the Greater Yellowstone Ecosystem to differ from that of the nearby plains. At middle elevations, lodgepole pine is the dominant tree species; in fact, the 4 million acres of lodgepole pine in the Ecosystem are the largest continuous expanse of the species in the United States. At the lower elevations (in many of the canyons of the surrounding mountains), Douglas-fir replaces lodgepole pine as the dominant tree species, while at higher elevations (near the tops of mountains and ridges), Engelmann spruce and subalpine fir, interspersed with alpine meadows, are more common. The plains to the west of the area are covered with sagebrush and grasses, while the plains to the east are dominated by needlegrass-wheatgrass prairie.

FEDERAL AGENCIES

The various Federal agencies in the area meet periodically at the regional, as well as local, level in order to discuss problems relating to the Greater Yellowstone Ecosystem. 3/ These meetings are held regularly, but vary in membership, depending on the subject matter and the likelihood that a given Federal agency would be affected by the issue. State officials may also be invited, when appropriate.

3/ Forest Service briefing for staff of Interior Committee, October 2, 1985.

A special independent Interagency Grizzly Bear Committee (IGBC) has been formed to deal with the problems of bear management. Its members represent the Fish and Wildlife Service, the Forest Service, the National Park Service, and a representative from the States of Idaho, Wyoming, and Montana. The IGBC deals with grizzlies throughout the 48 states; a Yellowstone Ecosystem Management Subcommittee deals with the bears of that area particularly.

Each of the major Federal agencies and their roles are discussed below.

National Park Service

Yellowstone and Grand Teton National Parks are the core of the Greater Yellowstone Ecosystem. (References to "the Park" in this report are references to Yellowstone, unless otherwise indicated.) Yellowstone was the world's first National Park when it was created in 1872. At 2.2 million acres, it remained the nation's largest until the signing of the Alaska National Interest Lands Conservation Act in 1980. Yellowstone is famous for its geothermal activity, and also possesses impressive canyons, waterfalls, remnants of volcanic activity, and abundant meadows, forests, and mountain vistas. The Park is home for abundant wildlife. Grand Teton National Park (310,500 acres) to the south contains spectacular mountains which rise over 7000 feet from the surrounding plain. Grand Teton is likewise home to abundant wildlife. There was a combined total of about 3.6 million visits to both Parks in 1984.

Generally, Park Service policy provides the most protection for resource preservation of all Federal land managing agencies: one of the purposes of the National Park System is to preserve outstanding natural resource values. However, the Park Service faces the sometimes contradictory demand to provide for public enjoyment. The conflicts can become serious when visitor use is high, as it is in many places at Yellowstone.

The Park Service is responsible for managing wildlife in the Parks. Within Yellowstone, several actions to reduce confrontations between grizzlies and visitors have been taken or proposed. Certain remote areas have been closed in the wake of bear attacks or where grizzly usage was high. To date, these closures have had minimal negative impact on recreation.

Closure of an area called Fishing Bridge has been proposed because the area is popular with both people and bears for fishing. Residents of Cody, Wyoming, feared that closure of the Fishing Bridge Campground would reduce tourism. The Park Service has indicated that an environmental impact statement (EIS) on the closure will be prepared, and a draft should be available for public review in mid or late 1986. 4/

Fish and Wildlife Service

The Fish and Wildlife Service manages six National Wildlife Refuges (NWR) in the tri-state area (see map 1), but only two of these are usually considered part of the Greater Yellowstone Ecosystem. The 24,300-acre National Elk Refuge provides winter range for the Jackson Hole elk herd which uses the two National Parks and the Teton National Forest in summer; this herd is the second largest of the Park's seven herds, with about 5,000 animals. Red Rock Lakes NWR, with 32,500 acres, is also typically included in the Ecosystem, because it is used by many of the animals, including bald eagles and trumpeter swans, which also use the Park. The Refuge also has a feeding program for overwintering birds.

The Grays Lake NWR (16,200 acres) is not normally considered part of the Greater Yellowstone Ecosystem, but deserves mention since it is the site of a new flock of whooping cranes, an endangered species. The whoopers are being

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4/ Tim Doherty, Office of Environmental Compliance, National Park Service. Personal communication. October 16, 1985.

raised by sandhill cranes acting as foster parents. The sandhills of the Grays Lake NWR have used the Park and Red Rock Lakes NWR in the past. The first juvenile whooper was seen this summer in the Park. 5/ It seems likely that the whoopers' use of the Greater Yellowstone Ecosystem will increase as the number of birds increases.

U.S. Forest Service

The Greater Yellowstone Ecosystem includes lands from at least five National Forests, as shown in map 1. Most of the Gallatin National Forest and about 40 percent of the Custer National Forest are included in the area; these forests are in the Forest Service's Northern Region (Region 1). The Ecosystem also includes most of the Shoshone National Forest, in the Rocky Mountain Region (Region 2). About half of the Targhee National Forest and all of the Teton National Forest, in the Intermountain Region (Region 4), are part of the Ecosystem. Depending on the specific boundaries of the Ecosystem, small portions of the Beaverhead National Forest (in Region 1) and the Bridger National Forest (in Region 4) may be included. 6/ These National Forests are heavily used for recreation and provide some of the habitat for the wildlife which help make the Yellowstone area famous, but they also produce timber and many areas are leased for energy or mineral exploration.

5/ Personal communication with Wendy Brown, Research Biologist, University of Idaho. October 7, 1985.

6/ The Bridger and the Teton National Forests are distinct National Forests, but they are managed as a single administrative unit and are typically referred to as the Bridger-Teton National Forest.

Bureau of Land Management

The Bureau of Land Management (BLM) manages very little land in the Greater Yellowstone Ecosystem, although the exact acreage in the area depends on the specific boundaries proposed. The BLM is significant in another way, however: the BLM issues and administers oil, gas, and geothermal leases on the National Forests. However, on Forest Service land, the Forest Service can stipulate the restrictions on surface disturbance. The extent of these activities is discussed below, under Development Issues.

WILDLIFE ISSUES

Animals generally establish home ranges in accordance with their resource needs. These home ranges may be congruent with the distribution of favored food sources, resting areas, prey species, or other requirements. Animals may move seasonally or even daily, depending on the species or on changes in the distribution of necessary resources. In many cases, these movements take the animals across Park, Forest, and Refuge boundaries, or onto private land. Their movements may bring them into conflict with humans. The animals of greatest concern are elk, bison, trumpeter swans, bald eagles, and especially grizzly bears.

Grizzly bears

Grizzlies (*Ursus arctos horribilis*) are listed as threatened in the 48 coterminous states under the Endangered Species Act. Estimates indicate that the Park's bear population has declined to about 200 animals over the last several years. Their distribution covers all of Yellowstone National Park, and portions of Grand Teton National Park as well as portions of all of the contiguous National Forests. Because of their prominence in the Ecosystem, boundaries defining the Ecosystem are usually chosen so as to include all of their known distribution. (Compare map 2, and map 4, which shows distribution of grizzlies.) A recent paper estimates that "a minimum of 125 bears should be maintained to ensure high probability of a viable grizzly bear population for 100 years in the Yellowstone ecosystem." 7/

The low reproductive rate of bears has hampered recovery efforts. Females do not breed until age five, and then tend to have only one or two cubs every three to four years. There are an estimated 32 female bears of reproductive age in the Park. 8/ Consequently, the expected reproductive rate is from 8 to 22 bears annually.

Statistics on the unnatural deaths of bears are hard to obtain, since many kills are illegal. The only legal kill is a controversial hunt in Montana.9/ The state places a limit of 25 dead bears from all man-caused sources annually, including road kills, known poaching, hunting, and so on. In practice, this leaves about 10 or so bears annually for hunters in the entire state. This hunt occurs only around Glacier National Park where is a substantial population of grizzlies; hunting of grizzlies is not legal in or near the Yellowstone Ecosystem.

Unnatural deaths can also arise from poaching, clashes with hunters or ranchers, and deliberate removal. Poachers can obtain $700 for a hide, $500

7/ Suchy, Willy J., Lyman L. McDonald, M. Dale Strickland, and Stanley H. Anderson. New estimates of minimum viable population size for grizzly bears of the Yellowstone ecosystem. Wildlife Society Bulletin, v. 13.(3), 1985: 223-228.

8/ Turbak, Gary. Grizzly on the ropes. American Forests, February, 1984: 22-23, 48-49.

9/ U.S. Congress. Senate. Grizzly bear management in the Yellowstone ecosystem. Hearing, 98th Congress, 1st session. Aug. 11, 1983. Washington, U.S. Govt. Print. Off., 1984. 130 p.

for feet, and $100 for gall bladders. 10/ Hunters outside the parks occasionally kill bears that are attracted to their camps by game carcasses. Bears are sometimes shot by sheep ranchers who blame bears for taking sheep. Finally, some bears die in government-sanctioned killing of problem bears. As few eight kills of these types can exceed the annual birth rate of the population. Natural mortality would cause further losses.

Some problems of bear management arise inside the Park. In the late 1960's, the National Park Service eliminated the bears' open access to garbage dumps, in an effort to reduce unnatural concentrations of bears around these dumps. The bears lost a reliable food source, and bears, needing new food sources, spread more widely in the Park. Some may have died. How many died and how many were simply harder to count is still open to question. Bears turned to garbage outside of the Park, particularly around the northern edge. This use of external dumps by bears habituated to human contacts has lead to aggressive confrontations between people and bears. High levels of Park use increase the chance of bear-human conflicts. Certain areas have been closed temporarily to human access in order to let bears feed without interference. These closures amounted to less than 10% of the Park's land, but serious protests resulted from this policy. These came in part from businessmen outside the Park who stated that they feared a loss of sales.

Outside the park, human-bear conflicts arise over logging, roads, oil and gas leasing, geothermal leasing, home and condominium development around Jackson Hole and the Snake River, and a proposed major ski resort called "Ski Yellowstone" a few miles west of the Park in Gallatin National Forest. Gold,

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10/ Turbak, Gary. Grizzly on the ropes. American Forests, February, 1984: 22-23, 48-49.

silver, and chromium mining on the north side also raise possibilities for conflicts with bears.

Elk

About 30,000 elk (*Cervus elaphus*) live in Yellowstone Park for at least part of the year, but only one of nine herds has a winter range almost entirely in the park. 11/ Use is heaviest in the summer, when elk browse in the higher elevations. In the winter, elk generally leave the Park for lower canyons and other sheltered areas. Distributions of these herds are shown in map 5.

This seasonal migration represents the most obvious and observable dependence of any species on lands both in and out of the Park. At lower elevations outside the Park, they may encounter summer homes, fences, roads, mineral leasing, and ski developments. Any of these developments may restrict migration or destroy suitable foraging sites; they may also be damaged by the elk. The animals may reach ranching and farming areas where they may damage crops or spread disease. A major concern in the last two years has been the construction of an elk-proof fence on the west side of the Yellowstone River north of the Park. Intended to protect crops, the fence has prevented the largest of Yellowstone's herds (16-18,000 animals) from reaching a substantial portion of its winter range. Since the elk herds are known to carry brucellosis, there is concern among ranchers about contamination of cattle herds. Ranchers avoid running cattle in areas where elk have calved in order to prevent spread of the disease. Vaccination of the elk is not considered feasible.

11/ Personal communication concerning elk biology with Frank Singer, Wildlife biologist, Yellowstone National Park. October 7, 1985.

An existing ski development -- Big Sky in Montana -- causes some disruption of another herd which passes through the area during its migration. A park biologist judged the effects as minor, if the size of the development does not increase. However, the Ski Yellowstone development, a proposed ski resort, would occupy an area currently used for both summer and winter range, and its effects could be more serious.

Bison

There are about 2000 bison (Bison bison) in the Park. 12/ The majority of the herd remains in the Park throughout the year, but roughly 3 to 4 percent of the herd use the areas adjacent to the Park during part of the year, particularly in winter. Their distribution is shown in map 6. These areas of "leakage" are along the northern border near Gardiner, on the eastern border in the Shoshone National Forest, and on the southwestern border in the Targhee and Gallatin National Forests. Each of these areas provides potential conflicts with human usage, mineral development, or timber harvest. Bison also carry brucellosis. However, since the bulk of the herd remains in the Park, conflicts regarding disease or other problems have been rare.

Trumpeter Swans

Trumpeter swans (Cygnus buccinator) are not listed as endangered. However, in 1932, the species was thought to be very depleted, and the population in the Greater Yellowstone Ecosystem was only about 57 resident

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12/ Personal communication on bison with John Varley, Chief of Research, Yellowstone National Park. October 8, 1985.

pairs. 13/ The Yellowstone Ecosystem represents an extremely crucial area for the species in both the U.S. and Canada. 14/ The population has two components: resident birds, and those that only winter in the area.

The larger component consists of overwintering birds. This winter population includes about 95% of the Canadian population of trumpeter swans. The swans feed on submerged aquatic vegetation. The geothermal activity throughout the area results in many streams that do not freeze over during the winter, and the swans are dependent on this open water for food. Swans also rely on an artificial feeding program at Red Rock Lakes National Wildlife Refuge. The birds' winter range is shown in map 7.

The smaller component is made up of 300-400 resident birds. These birds breed on small ponds in and around the Park. The population of resident swans in the tri-state area has not been doing well, according to Gale. The number of nesting pairs inside the Park has dropped from 20 to 10 in the last six years, due to human interference at lakeshore nesting sites.

Gale argues that the swans' reproductive success could be improved substantially by creating very small artificial nesting islands in preferred lakes, at locations only a few yards from shore. 15/ The Park Service has a policy of avoiding further manipulation of the environment inside the Park. Gale argues that such islands could be construed as a mitigation of human disturbance of these areas, and therefore within Park Service guidelines.

13/ Frank C. Bellrose. Ducks, Geese, and Swans of North America. 1976. Harrisburg, Penn. Stackpole Books. 544p.

14/ Personal communication on trumpeter swans with Ruth Gale, Biologist, Montana Cooperative Wildlife Research Unit. October 7, 1985.

15/ Ibid.

Bald Eagles

Bald eagles (Haliaetus leucocephalus) are endangered throughout the region, although their populations rose substantially since the ban on DDT. There are now 55 nesting pairs in the area, including 12 pairs which nest in the Park. The distribution of the birds is shown in map 8. The Ecosystem is home to a substantial portion of the bald eagles in the Rocky Mountain States. The population growth of the last few years is largely attributable to only six pairs nesting along unusually rich rivers and streams south of the Park, where the birds feed on trout and Utah suckers. 16/ Much of this prime fishing and nesting habitat around Jackson Hole and the Snake River is threatened by housing development and by construction of levees. Such construction could produce enough damage to the watershed to destroy the spawning areas of cutthroat trout, on which the eagles are heavily dependent. Thus, this species is distinguished from other species considered here, in that areas likely to be altered by human activities may be the best available habitat in the Ecosystem, rather than one of many equally suitable habitats.

RECREATIONAL USE

Recreational activity in the Parks includes viewing and photographing the wildlife and scenery, as well as hiking, backpacking, bicycling, camping, boating, and fishing. The number of visitors to the Parks has been fairly constant over the last few years at 2.2 million visitors in Yellowstone and 1.4 million in Grand Teton. However, Yellowstone Superintendent Barbee recently reported to the Wyoming Governor's Recreation Action Team that the winter use

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16/ Personal communication on bald eagles with Robert Oakley, Wyoming Fish and Game Department. October 4, 1985.

of Yellowstone is increasing rapidly. He cited an increase in snowmobile on park roads from 6 in 1964 to over 31,000 in 1982-83. Over 38,000 people used these machines in 1982, and an additional 8,000 people toured the park in snowcoaches operated by a concessionnaire. Park personnel indicate that wildlife seem to adjust to snowmobiles.

Barbee also noted an "explosion" in cross-country skiing, but did not cite numbers. This skiing takes place both on roads and in off-road areas, though some skiers ski their own courses. Park personnel report that cross-country skiers tend to make the animals more wary. Otherwise, there appear to be no adverse impacts on the park from expanded winter use.

Surrounding National Forests support similar recreation and also allow hunting and off-road vehicles (ORVs) in some areas. The five principle National Forests in the Ecosystem reported nearly 7.5 million recreation visitor days (RVDs) in 1984, including almost 1.8 million RVDs of camping by individuals, 447,900 RVDs of big game hunting, and 413,700 RVDs of hiking. 17/

Downhill Ski Areas

There are numerous developments for downhill skiing in the high mountains surrounding Yellowstone National Park. The most famous area is Jackson Hole, in the Teton National Forest, west of Jackson, Wyoming. The Grand Teton Park area also has the Grand Targhee Ski Area, due west of Grand Teton Peak, and Snow King, on private land outside Jackson. There are two ski areas north of Yellowstone: Big Sky of Montana, in the Gallatin National Forest, and Red Lodge Mountain, in the Custer National Forest. The Sleeping Giant Ski Area is

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17/ Unpublished Forest Service data. The number of visitors may substantially differ from the number of RVDs, because RVDs estimate the number of hours spent by visitors, measured in 12-hour blocks.

located east of Yellowstone, on the Shoshone National Forest. Finally, a new ski area, "Ski Yellowstone", has been proposed near West Yellowstone, Montana, partly in the Gallatin National Forest.

Ski developments can affect several other resources. Ski areas attract numerous visitors; the six areas listed above provide about 300,000 recreation visitor days (RVDs) of use annually. 18/ The location of a ski development determines its potential conflicts with wildlife. For example, a ski area near elk wintering grounds or across elk migration routes (especially if migration occurs when the snow is deep enough for skiing) could disturb elk populations. Similarly, since grizzly bears generally avoid areas with human presence, a ski development in areas used by grizzlies would likely displace the bears. Ski areas could also conflict with other resources, such as timber or oil and gas; because skiers are concerned about the beauty of the areas (a major attraction of Jackson Hole, for example), timber harvesting or oil drilling could disrupt the recreational experience.

New ski developments are likely to have incremental effects; wildlife and other resource users have, for the most part, already adapted to the existing ski areas. Thus, the proposed "Ski Yellowstone" could have additional impacts that could create a need to assess cumulative effects of such developments. In 1977 and again in 1984, Fish and Wildlife Service findings of "no jeopardy" to grizzly bears from this proposal were issued, but according to National Parks magazine, "new information documents the existence of . . . grizzlies in the area." 19/ The Forest Service has issued a special-use permit for the Gallatin National Forest to allow development to proceed.

18/ Unpublished Forest Service data.

19/ "Ski Yellowstone" Plans Add to Grizzly Threats. National Parks, v. 58 (Sept./Oct. 1984): 36-37.

WILDERNESS DESIGNATIONS

A substantial amount of Federal land in the Greater Yellowstone area has been designated or proposed for wilderness, as shown in table 2. Wilderness area management differs from management of other Federal lands, since logging, roads, new energy or mineral leasing, and motorized vehicles are generally prohibited from wilderness areas. These human activities are restricted to areas outside wilderness boundaries, thus leaving wilderness areas relatively undisturbed by development. In the Greater Yellowstone Ecosystem, more than half of the Federal land has been recommended for or has been designated wilderness, and thus is protected from development.

More than 90 percent of Yellowstone Park and nearly half of Grand Teton National Park were recommended for wilderness by the Secretary of the Interior in 1972. Congress has not yet added these lands to the National Wilderness Preservation System, but they are being managed, in the interim, to protect the values which led to the wilderness recommendation. National Parks typically prohibit timber harvesting and energy development, but wilderness designations would also restrict road construction and recreation developments, such as campgrounds. Most of Red Rock Lakes National Wildlife Refuge was included in the Wilderness System in 1976.

Nearly half of the National Forest System lands in the Greater Yellowstone Ecosystem are designated as wilderness or proposed for designation. Major wilderness designations were enacted in the Wyoming Wilderness Act of 1984 and the Lee Metcalf Wilderness Act of 1983, but wilderness recommendations are still pending in the Targhee National Forest in Idaho and in the Gallatin National Forest in Montana. Additional National Forest lands are still being considered for possible wilderness designation, including three Wilderness Study Areas in Wyoming (180,540 acres) and four RARE II Further Planning areas

(162,300 acres, mostly in the Gallatin National Forest). Finally, many roadless areas have not been "released", thus requiring wilderness consideration in the ongoing National Forest planning; this includes 188,160 acres in the Gallatin National Forest, 90,440 acres in the Custer National Forest, and 79,640 acres in the Targhee National forest.

DEVELOPMENT ISSUES

Timber Harvests

A substantial amount of timber is sold from the national forests in the Greater Yellowstone Ecosystem. The primary species harvested from these forests is lodgepole pine, although Douglas-fir, Engelmann spruce, and subalpine fir are also cut. The six national forests sell about 130 million board feet annually, with more than half coming from the Targhee National Forest. At the Idaho average of 7 employees per million board feet of timber harvested 20/, about 900 jobs would result from timber sales in these six national forests. However, direct timber-dependent jobs accounted for less than 10 percent of total employment in the counties around Yellowstone in 1970. 21/ These jobs are not entirely dependent on timber from the Greater Yellowstone Ecosystem, because many of the timber sales in these national forests are outside the Ecosystem; about 40 percent of the available commercial forest land in these forests is outside the Greater Yellowstone Ecosystem.

20/ Bell, Enoch F. Estimating Effect of Timber Harvesting Levels on Employment in Western United States. Forest Service Research Note INT-237. Ogden, UT, U.S. Dept. of Agriculture, Nov. 1977. p. 4.

21/ Ibid. p. 3.

Timber sales generate revenues for the Federal Government; since 1980, these six forests have yielded revenues exceeding $2 million annually. Prices have averaged nearly $17 per thousand board feet, but have ranged from less than $3 on the Shoshone in 1980 to more than $50 on the Bridger-Teton in the same year. The Forest Service also incurs costs to prepare and administer the timber sales; in 1982, direct timber sale costs on these six forests averaged nearly $40 per thousand board feet, although the average costs on individual forests ranged from less than $30 on the Bridger-Teton to more than $70 on the Custer. It seems likely that many (though certainly not all) of the national forest timber sales in the Greater Yellowstone Ecosystem have direct costs that exceed the receipts.

Timber sales have impacts other than forest industry employment and Federal cash flows. Timber harvesting clearly changes the local environment, thus affecting wildlife habitat by altering the amount and relationship between food and cover. Timber harvesting is also accompanied by road construction. Roads can be beneficial for some forest users, by improving access for certain types of recreation and for forest fire suppression. However, improved access can be detrimental for other purposes; road construction occasionally results in stream sedimentation and temperature changes, thus affecting fish habitat, and as noted above, wildlife such as grizzly bears are particularly susceptible to disturbance by human activity. Increased human activity, as typically results from timber harvesting and road construction, may be desirable for some users, but can have unintended harmful effects as well.

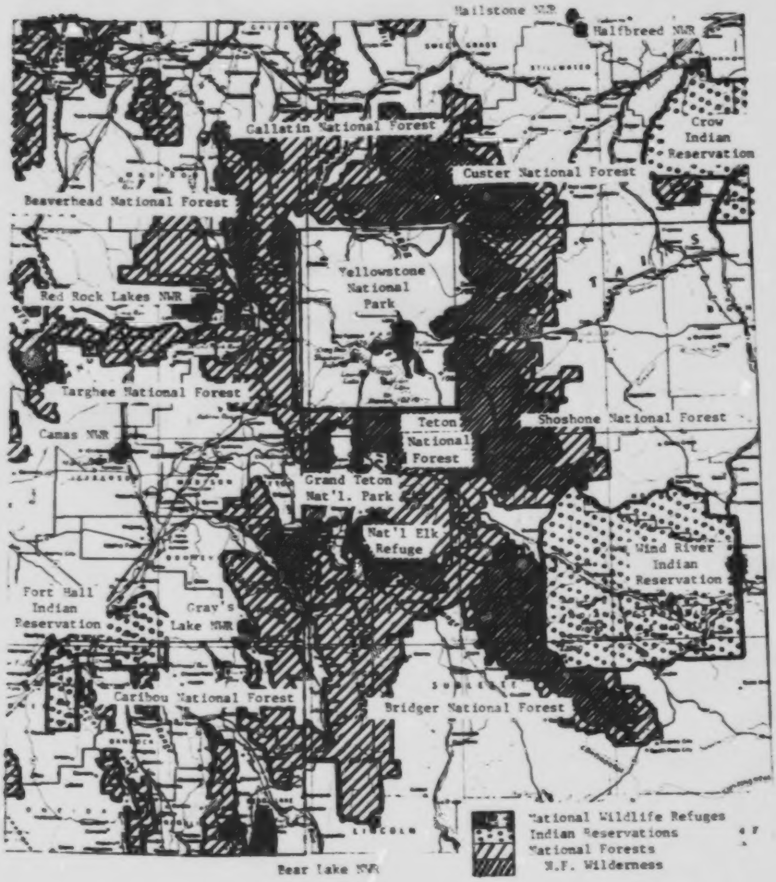
Energy and Mineral Leasing

Much of the interest in underground resources of the Yellowstone area has focused on the potential for geothermal energy development. Geothermal interest has, to date, been concentrated in the Island Park Known Geothermal Resource Area, south of Red Rock Lakes, in and around the Targhee National Forest, adjacent to the Ecosystem; more than 125 lease applications have been filed for geothermal energy development this area. Some are concerned that the suspected geothermal potential of the area is related to the geysers and hot springs in Yellowstone, and that development might affect these phenomena in the Park. The leasing authority of the Secretary of the Interior for this area was restricted for FY85 by the 1985 Continuing Appropriations for the Department of the Interior and Related Agencies (Public Law 98-473); the restriction has since expired, but the BLM has chosen not to issue any geothermal leases in the area until final congressional resolution of the controversy.

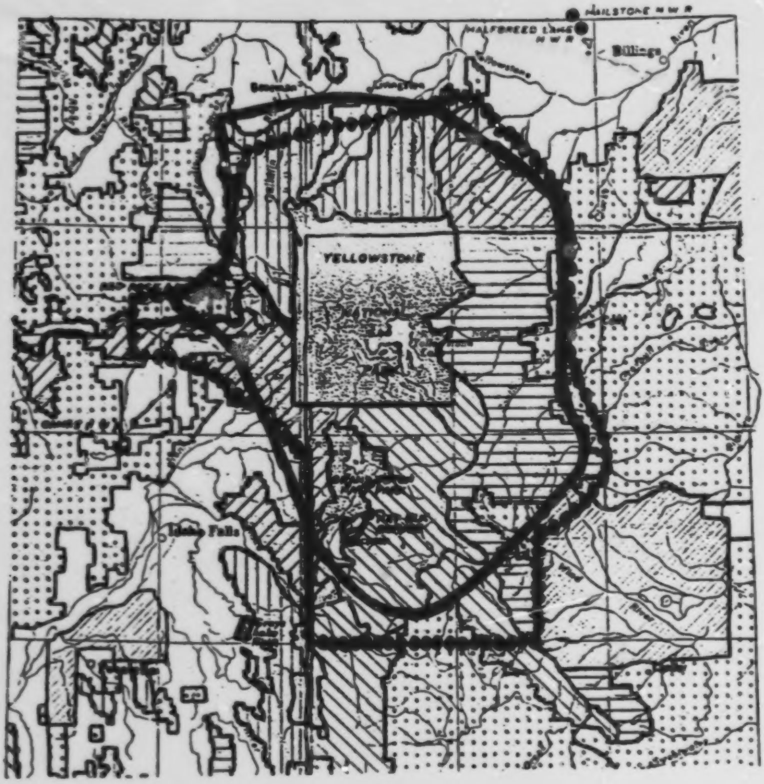
Oil and gas exploration in the Greater Yellowstone Ecosystem has been rather limited. The Bighorn Basin has some development, but is generally located east of the area, toward the Bighorn Mountains. The Overthrust Belt, which has been the focus of much exploration activity, skirts Yellowstone on the west, and is generally outside the Ecosystem. There is active drilling in two areas bordering the Ecosystem: in the Targhee National Forest in Idaho, southwest of Jackson, Wyoming, and in the area of Dubois, Wyoming, between the Shoshone National Forest and the Wind River Indian Reservation. There has been little or no oil and gas development in the Ecosystem, although substantial acreage has been leased and might be developed in the future.

There is very little mining and other mineral activity in the Yellowstone area, despite the fact that the area is generally mineralized, containing scattered deposits of gold, silver, copper, and other metals. The only commercial mining operation is a bentonite mine in the Shoshone National Forest near Cody, Wyoming. There is also a gold mine on private land near Jardine, Montana, near the north border of Yellowstone Park, which is almost in production.

Map 1. Public lands in the Greater Yellowstone Ecosystem


Hailstone NWR
Halfbreed NWR
Gallatin National Forest
Crow Indian Reservation
Custer National Forest
Beaverhead National Forest
Yellowstone National Park
Red Rock Lakes NWR
Targhee National Forest
Teton National Forest
Shoshone National Forest
Camas NWR
Grand Teton Nat'l. Park
Nat'l Elk Refuge
Wind River Indian Reservation
Fort Hall Indian Reservation
Gray's Lake NWR
Caribou National Forest
Bridger National Forest
Bear Lake NWR
National Wildlife Refuges
Indian Reservations
National Forests
N.F. Wilderness

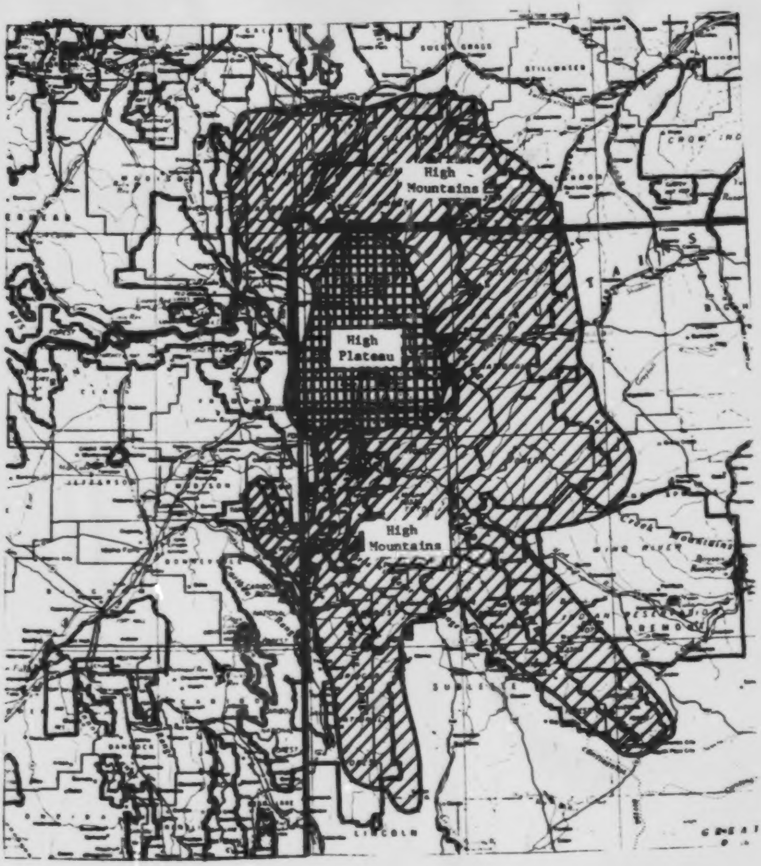
Map 2. Two versions of boundaries of a Greater Yellowstone Ecosystem


HAILSTONE N W R
HALFBREED LAKE N W R
Billings
Bozeman
Livingston
Yellowstone
YELLOWSTONE
NATIONAL
Idaho Falls

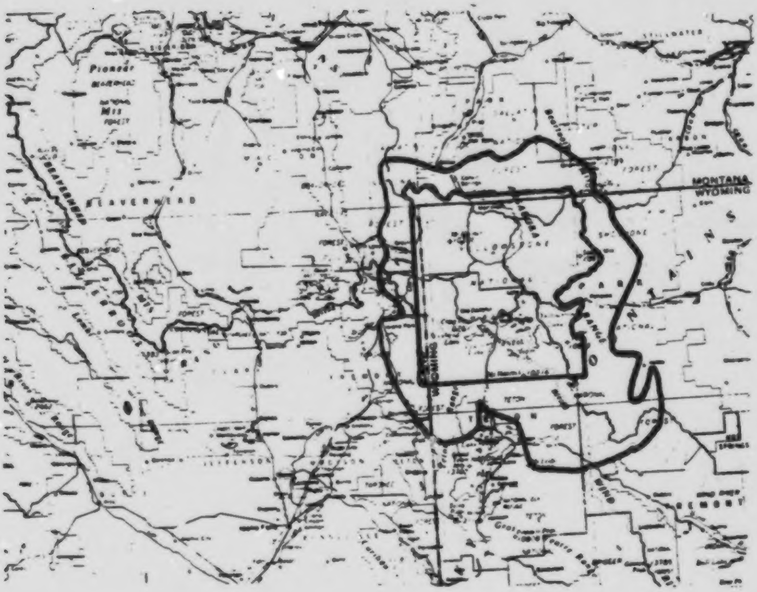
Greater Yellowstone Coalition's Ecosystem boundary:

━━━ as adapted by the Washington Post, June 23, 1985
●●●● as adapted by the Chicago Tribune, August 25, 1985

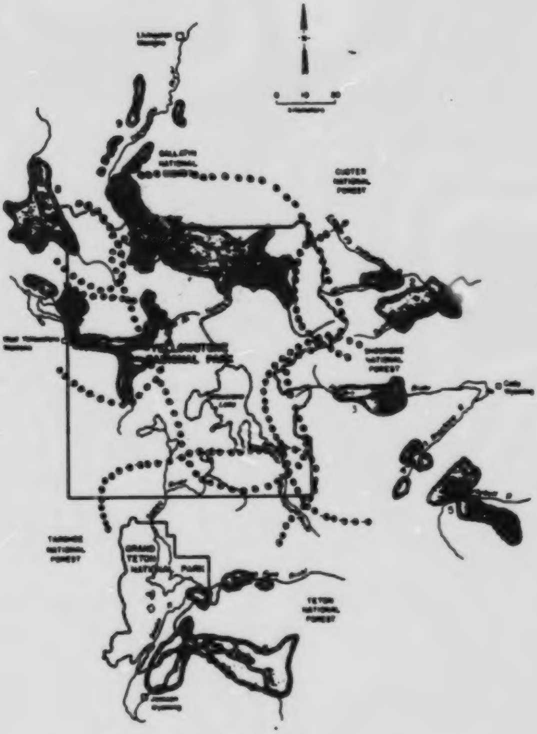
Map 3. Landforms in the Yellowstone area. Based on National Atlas of the United States. U.S. Geological Survey, 1970. p. 62.


High Mountains
High Plateau
High Mountains
STILLWATER
SUBLETTE
LINCOLN

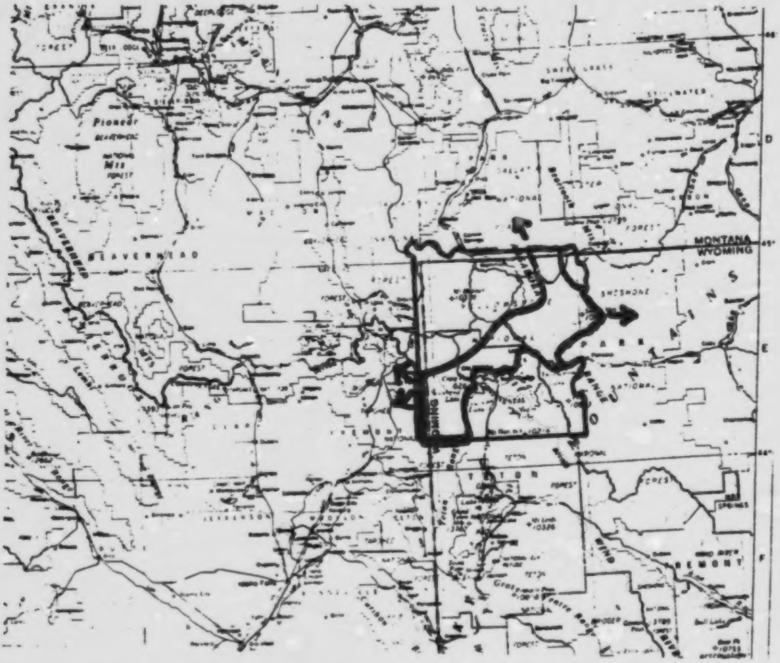
Map 4. Distribution of grizzly bears in the Greater Yellowstone Ecosystem. Based on Grizzly Bear Recovery Plan. U.S. Fish and Wildlife Service. 1982. Redrawn from Fig. 3.

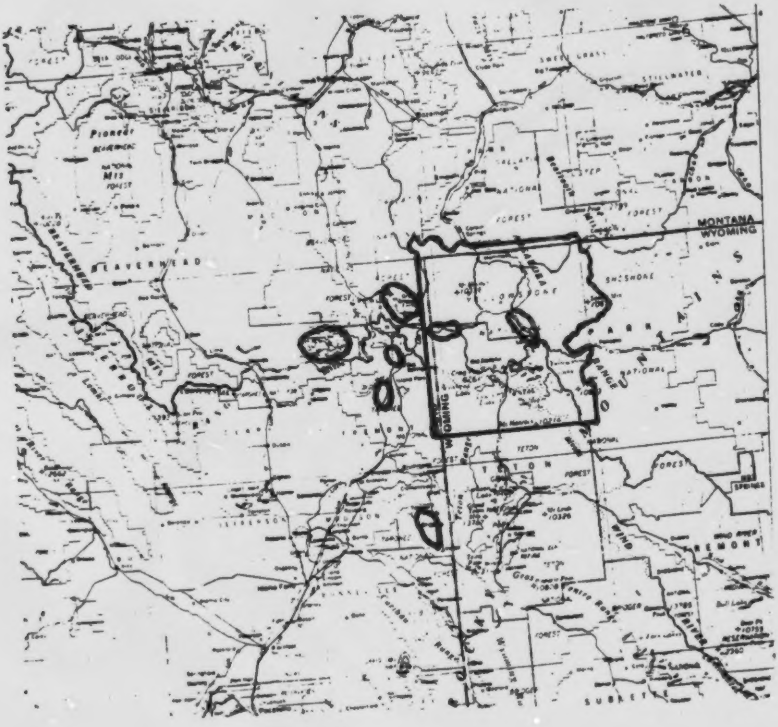

Pioneer
BEAVERHEAD
MONTANA
WYOMING

Map 5. Distribution of elk in the Greater Yellowstone Ecosystem. Taken from D. B. Houston. The Northern Yellowstone Elk. New York. MacMillan Publishing Co. 1982. Taken from Figure 4.2. Below, solid lines indicate winter ranges; dotted lines show the herds' overlapping summer ranges in the Park only.


0 10 20
GALLATIN NATIONAL FOREST
CUSTER NATIONAL FOREST
YELLOWSTONE NATIONAL PARK
SHOSHONE NATIONAL FOREST
3
5
TARGHEE NATIONAL FOREST
GRAND TETON NATIONAL PARK
TETON NATIONAL FOREST

Map 6. Distribution of bison in the Greater Yellowstone Ecosystem, with arrows showing where small numbers of bison leave Park boundaries. Based on M. M. Meagher. Yellowstone's Bison: A Unique Wild Heritage. National Parks and Conservation Magazine. 48(5) (May 1974): 9-14.


MONTANA
WYOMING
BEAVERHEAD
Pioneer
Mts
SHOSHONE
TETON
FREMONT
D
E
F



Map 7. Distribution of trumpeter swans in the Greater Yellowstone Ecosystem, showing principle winter habitats. From Ruth Gale, Montana Cooperative Wildlife Research Unit. Personal Communication.

MONTANA
WYOMING
Pioneer Mts
BEAVERHEAD
SWEET GRASS
STILLWATER
SHOSHONE
NATIONAL
FOREST
TETON
JEFFERSON
SUBLETTE

Map 8. Distribution of bald eagles in the Greater Yellowstone Ecosystem, showing three bald eagle population units. Wyoming Fish and Game Department. A Bald Eagle Management Plan for the Greater Yellowstone Ecosystem. 1983. Taken from Figure 2, p. 3.

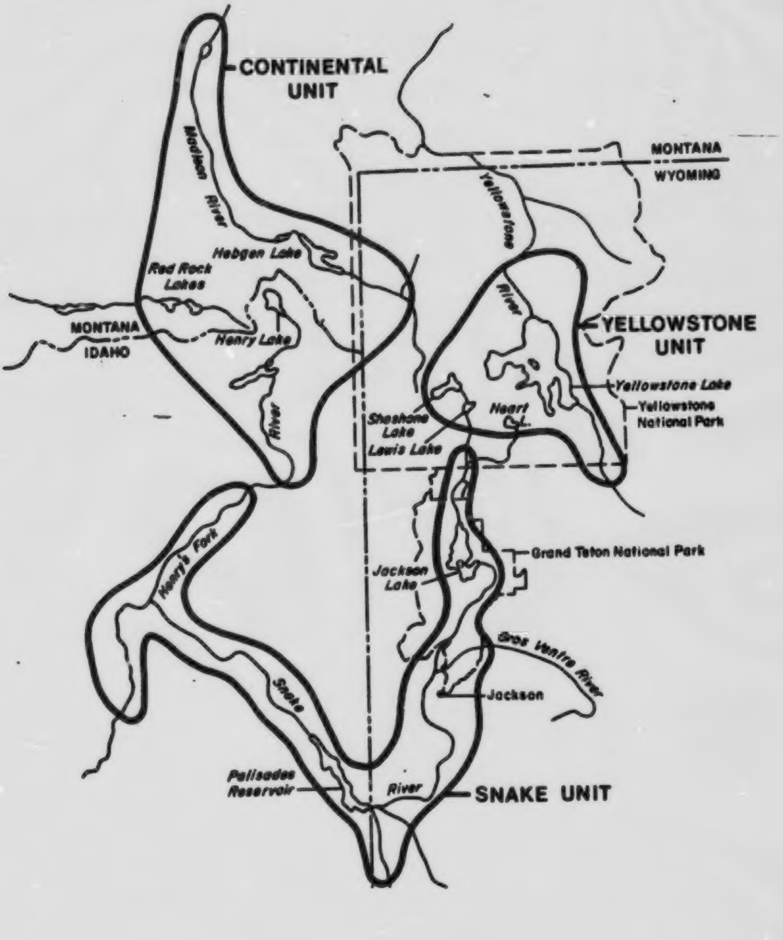

CONTINENTAL UNIT
Madison River
MONTANA
WYOMING
Yellowstone River
Hebgen Lake
Red Rock Lakes
MONTANA
IDAHO
Henry Lake
River
YELLOWSTONE UNIT
Yellowstone Lake
Yellowstone National Park
Heart L.
Shoshone Lake
Lewis Lake
Grand Teton National Park
Jackson Lake
Henry's Fork
Gros Ventre River
Jackson
Snake
Palisades Reservoir
River
SNAKE UNIT

TABLE 1. Acreage, by Ownership, in the Greater Yellowstone Ecosystem.

	Gross Area	Area In Ecosystem		Private Inholdings		Net Area In Ecosystem
Yellowstone N.P.	2,219,800	2,219,800	100%	0	0%	2,219,800
Grand Teton N.P.	310,500	310,500	100%	2,300	1%	308,200
Subtotal	2,530,300	2,530,300	100%	2,300	0%	2,528,000
National Elk Refuge	25,300	25,300	100%	1,000	4%	24,300
Red Rock Lakes N.W.R.	60,500	60,500	100%	28,000	46%	32,500
Subtotal	85,800	85,800	100%	29,000	34%	56,800
Beaverhead N.F.	2,199,400	196,900	9%	7,000	4%	189,900
Bridger-Teton N.F.	3,439,700	1,695,100	49%	28,400	2%	1,666,700
Custer N.F.	1,278,200	510,900	40%	37,300	7%	473,600
Gallatin N.F.	2,150,700	1,795,800	83%	347,000	19%	1,448,800
Shoshone N.F.	2,466,600	2,034,900	82%	27,700	1%	2,007,200
Targhee N.F.	1,688,600	980,600	58%	23,300	2%	957,300
Subtotal	13,223,200	7,214,200	55%	470,700	7%	6,743,500
Bureau of Land Mgmt.	n/a	20,000		n/a		20,000
TOTAL FEDERAL LAND	15,839,300	9,850,300		502,000	5%	9,348,300
Private Land Blocks						340,000
TOTAL PRIVATE LAND						842,000

SOURCES: Congressional Research Service estimates from:
U.S. Department of Agriculture, Forest Service. Land Areas of the National Forest System, As of September 30, 1983. Report No. FS-383. Washington, U.S. Govt. Print. Off., 1983.
U.S. Department of the Interior. Index: National Park System and Related Areas, As of June 1, 1982. Washington, U.S. Govt. Print. Off., 1982.
U.S. Department of the Interior, Fish and Wildlife Service, Division of Realty. Annual Report of Lands under Control of the U.S. Fish and Wildlife Service, As of September 30, 1984.
numerous different maps.

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TOTAL FEDERAL LAND	15,839,300	9,850,300		502,000	5%	9,348,300
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U.S. Department of Agriculture, Forest Service. Land Areas of the National Forest System, As of September 30, 1983. Report No. FS-383. Washington, U.S. Govt. Print. Off., 1983.

U.S. Department of the Interior. Index: National Park System and Related Areas, As of June 1, 1982. Washington, U.S. Govt. Print. Off., 1982.

U.S. Department of the Interior, Fish and Wildlife Service, Division of Realty. Annual Report of Lands under Control of the U.S. Fish and Wildlife Service, As of September 30, 1984.

numerous different maps.

TABLE 2. Federal Wilderness in the Greater Yellowstone Ecosystem.

	Ecosystem Net Area	Designated Wilderness	Proposed Wilderness	Total	
Yellowstone N.P.	2,219,800	0	2,032,720	2,032,720	91.6%
Grand Teton N.P.	308,200	0	143,850	143,850	46.7%
Subtotal	2,528,000	0	2,176,570	2,176,570	86.1%
National Elk Refuge	24,300	0	0	0	0.0%
Red Rock Lakes N.W.R.	32,500	32,350	0	32,350	99.5%
Subtotal	56,800	32,350	0	32,350	57.0%
Beaverhead N.F.	189,900	90,375	0	90,375	47.6%
Bridger-Teton N.F.	1,665,700	863,300	0	863,300	51.8%
Custer N.F.	473,600	345,595	0	345,595	73.0%
Gallatin N.F.	1,449,800	704,190	23,900	728,090	50.3%
Shoshone N.F.	2,007,200	1,071,985	0	1,071,985	53.4%
Targhee N.F.	957,300	116,535	14,400	130,935	13.7%
Subtotal	6,743,500	3,192,080	38,300	3,230,380	47.9%
Bureau of Land Mgmt.	20,000	0	0	0	0.0%
TOTAL FEDERAL LAND	9,348,300	3,224,430	2,214,870	5,439,300	58.2%

United States Department of the Interior
NATIONAL PARK SERVICE
YELLOWSTONE NATIONAL PARK
WYOMING 82190

IN REPLY REFER TO:

K5415(YELL)

APR 04 1985

[redacted]

Dear Friends of Yellowstone:

The purpose of this letter is to provide a summary of current issues, the status of development projects, and other actions occurring in Yellowstone that will be of interest to you as well as members of the various publics that we serve and impact.

PLANNING AND DEVELOPMENT ACTIONS

GRANT VILLAGE

In July of 1984, new visitor facilities went into operation at the Grant Village area on the shore of Lake Yellowstone. TW Services and Hamilton Stores have made major investments in this area in accordance with their contracts. TW Services' facilities include 300 lodging units, restaurant, and registration office/gift shop. Hamilton Stores placed in operation a new general store with food service.

These facilities are in addition to the existing National Park Service (NPS) facilities located at Grant Village including a 433 site NPS campground, ranger station, visitor center, and laundry/shower building. Full automobile service is also available.

These new facilities represent the first stage of the development of the Grant Village complex as a major overnight accommodation center in the park. This action at Grant Village will enable us to accomplish other resource management actions in the park to ensure the preservation of the natural resources which the park was established to protect.

WEST THUMB

Over the next three years, the Hamilton general store, mini-store, and gas station will be phased out of the area. These facilities have been replaced by the new facilities at Grant Village. The gas station will be removed this spring, the general store in 1986, and the mini-store in 1987. This plan allows us to remove visitor service facilities from the midst of primary park features and replace them with new facilities just a few miles away.

OLD FAITHFUL

The Development Concept Plan has been completed for the Old Faithful area. This plan has been the subject of extensive public review, the last of which was the review of the draft Development Concept Plan (DCP). We expect the final DCP to be ready for distribution within the next month. The main components of the plan are removal of a significant number of the Old Faithful Lodge and Snowlodge visitor cabins; improved access circulation and parking into the area; improved pedestrian circulation throughout the area, and removal of unnecessary support facilities from such close proximity to the geyser basin, such as concessioner laundry and employee housing. I would like to emphasize that the Old Faithful Inn and Snowlodge will continue as overnight lodging facilities, providing accommodations for 1,100.

FISHING BRIDGE

The future of facilities at Fishing Bridge is the focus of considerable attention by those interested in Yellowstone National Park.

Because of the great interest surrounding this issue, Russell Dickenson, Director of the National Park Service, requested a thorough review of the biological basis for the original decision to remove facilities and to restore the area to its natural state. The review has been undertaken and the final report is now available. Director Dickenson reaffirmed the longstanding direction to remove existing visitor facilities from the area. This was based upon compelling evidence that the Fishing Bridge area is of transcending biological importance as a significant grizzly bear habitat and for other natural resource attributes. In reaffirming this objective, the Director recognized the controversial nature of the issues and stressed the NPS's concern for continuing the long tradition of camping and other services that are offered in the park.

In response to a request by the Wyoming congressional delegation, the Park Service is preparing an Environmental Impact Statement (EIS) for the Development Concept Plan (DCP). The EIS will address the proposed relocation of visitor use facilities from the Fishing Bridge area to other locations within Yellowstone National Park. Socioeconomic effects on gateway communities resulting from the proposed relocation will be analyzed and documented. Cumulative environmental effects concerning relocation of facilities within the park will also be analyzed and documented.

Analysis and alternative studies, currently underway, will continue. Alternatives will be developed as part of a future public scoping package. To receive a scoping package, contact me by writing, Yellowstone National Park, P.O. Box 168, Yellowstone National Park, Wyoming 82190.

WINTER USE

Work on a comprehensive Winter Use Plan has been ongoing since last fall. This document will supplement the Master Plan in guiding our growing winter operation. Alternatives for dealing with various aspects of winter use will be considered in the framework of a draft plan/environmental assessment. The document will describe existing conditions, identify issues, and propose solutions. All aspects of the park's winter operation will be examined, and a plan for all future winter facilities and services will be developed.

The following list of objectives for winter use in Yellowstone have been developed as basic guidelines for the planning effort.

- To preserve the opportunity for public enjoyment of the unique winter environment and solitude of Yellowstone.
- To preserve park resources for the enjoyment of future generations.
- To provide a range of visitor experiences within resource constraints.
- To provide for adequate visitor safety.
- To provide access to park resources at reasonable cost to the visitor, including the handicapped.
- To provide a range of accommodations, including low cost accommodations, in proportion to demand.
- To provide for appropriate commercial uses of the park in winter.
- To provide adequate visitor information and interpretation of park resources.
- To establish reasonably predictable opening and closing dates for the winter and summer seasons, and to provide adequate visitor information and services during the off seasons.

A draft plan/environmental assessment is expected to be released this summer. Following a public review of the draft, a final plan will be formulated. The final plan is scheduled for completion prior to the 1985-86 winter season.

RESOURCE MANAGEMENT

BEAR MANAGEMENT AREAS

Legislation creating Yellowstone National Park and the Threatened and Endangered Species Act requires the commitment of the National Park Service to the preservation of the grizzly bear. Management of Yellowstone's bears is frequently the source of controversy, but scientists agree that the population has declined and needs immediate attention to effect recovery.

The bear management program in the park continues with a high level of effort in preserving and maintaining populations of bears as part of the park's native fauna, and providing for visitor safety. The primary objectives are: 1) An informed public, with appreciation of the ecological and aesthetic value of bears, and an awareness that exposing bears to unnatural food sources may lead to human injury or to the bear's destruction. 2) Bears must be able to use important habitat with minimum human interaction. 3) To eliminate unnatural attractants to bears before control actions are required and before contacts occur. 4) To effect prompt removal of bears from developed areas when elimination of attracting food sources has not deterred their entry.

The limitation or restriction of human use in some portions of the park is an attempt to give grizzly bears preference in the use of certain key areas of important habitat. The park's bear management areas are designed with the flexibility to accommodate both short-range changes in bear activity and year to year changes, with the goal of restricting no more of the park than is necessary at any time to give the bears the room that they need. As the use limits are tested and studied, additional information will no doubt come to light that will further modify and refine the few necessary adjustments.

The Interagency Grizzly Bear Committee has appointed a special panel of public and private sector individuals who will review the Yellowstone closures and restrictions and will offer recommendations regarding this policy.

BISON

Yellowstone's bison are unique in the United States. Only here have wild bison survived since primitive times, long before establishment of the park in 1872. The Yellowstone herd provides cultural, scenic, educational, and scientific values which cannot be duplicated with bison herds elsewhere in the United States. The present population derives from two bloodlines: the original population of mountain bison, and the plains bison introduced in 1902.

Yellowstone bison are wild, free-ranging, unrestricted by boundary fences, and subject to minimal interference by man. The total population numbers about 2,000 at present. This population winters in three general areas: Lamar and Pelican Valleys and Mary Mountain (Hayden Valley-Firehole). None of these segments are geographically isolated at all seasons from the other; intermixing occurs to varying degrees.

Bison management in Yellowstone National Park has a goal of maintaining a truly wild, free-ranging population subject only to the influences of natural regulatory processes. This objective is unique in the United States. Nearly all other populations of bison are controlled by hunting or cropping, and are fenced; many are domesticated to some degree. However, the bison management objective for Yellowstone has been challenged because Yellowstone bison have brucellosis, apparently of the Brucella abortus type. The organism apparently does not affect the bison population adversely and is not regarded as a problem; indeed, the organism may be native to bison in North America.

Yellowstone bison appear to be a most unlikely source from which brucellosis can be passed to cattle in this area. There are no data to indicate a case of transmission between wild bison and cattle, nor between either of these bovids and wild elk, among which a low incidence of brucellosis can be found.

Herd groups, including cows and calves, have approached/crossed the boundary in the vicinity of the North and West Entrances. The State of Montana views

Yellowstone bison as carriers of brucellosis and as an inherent threat to domestic livestock whenever they leave the park. Therefore, we have developed a program of boundary control to ensure that those bison that do leave the park will not contact domestic livestock. Records compiled for a number of years generally indicate where and when such movement might occur. Bison that move beyond the park boundaries will be herded back by park personnel in cooperation with the state. Bison that do manage to evade such measures and move out of the park may be eliminated by state personnel.

ELK

The elk of Yellowstone National Park, together with the five other ungulate species, provide a large mammal viewing opportunity which is unparalleled in the contiguous United States. With a summer population estimate of between 25,000-30,000, the elk are the most abundant ungulate in the park. Elk distribution varies greatly by season. In the summer, elk use suitable range throughout the park and some of the herds intermix to some degree. Wintering areas are more limited and distinct.

The elk of the park are grouped into five major herds and one minor herd according to their winter ranges. However, Yellowstone National Park does not represent a complete habitat for the elk herds or portions of herds which are ecologically linked to winter ranges outside park boundaries. These animals are hunted on lands outside the park without seriously altering basic ecological relationships in the Yellowstone ecosystem or reducing the opportunities of visitors to see and photograph elk and other associated wildlife.

The major elk management issue has been population size and habitat relationships, particularly with regard to the northern Yellowstone herd. There has been no hunting or other artificial control of elk within the park since the winter of 1967-68. Thus, for 17 years, management of elk numbers has relied on natural regulation within Yellowstone combined with human predation on those population segments which winter outside the park.

The Northern Yellowstone Herd and its winter range has been the focus of controversy and research since the turn of the century. The herd was limited to 4,000-5,000 between about 1965-68 by control actions. A moratorium on reductions went into effect in 1969, and numbers have since increased to the present level of about 16,000. The most intensive research effort, spanning the years 1967-79 has shown that fire suppression, geology and climate outweigh elk numbers as influences on the vegetative condition on the northern range. For this reason, we do not allow human interference with those animals of the northern herd wintering within the park. The numbers wintering outside the park vary each year depending on winter severity, with the result that sport hunting does not take a consistent number of animals or portion of the herd annually.

With the present level of the elk population on the northern range, variable numbers of wintering elk move each year to portions of the herd's traditional winter range which are privately owned. Some landowners have expressed concern that elk numbers are excessive and that damage to their property, especially hay and pasture, is occurring. However, local resident groups of elk also utilize some of these private lands. These concerns have been accompanied by requests that the park resume artificial control measures. However, wild animals that leave park boundaries become subject to state, rather than federal, legal jurisdiction.

HAZARD TREE REMOVAL

Many campgrounds and most roads in Yellowstone National Park were constructed under a canopy of old growth lodgepole pine. Age, insects, disease, and soil compaction, make the trees highly susceptible to windfall, and thus present a real safety hazard to the camper and traveler. There are five major campgrounds (Madison, Indian Creek, Bridge Bay, Norris, and Grant Village) and 190 miles of roads where tree hazards are a serious threat to visitors and their property.

Tens of thousands of trees along a twenty-two mile strip were felled by a windstorm on July 8, 1984, demonstrating the hazard posed to visitors by large lodgepole pines.

All lodgepole pine trees over five inches in diameter have been removed from Bridge Bay Campground and the resulting stumps ground off. Roadside hazard trees have been removed from the South Entrance, Craig Pass, and Lake-West Thumb highways. This was accomplished by a private contractor.

The removal of beetle-killed trees from Madison Campground was completed. Permits were sold to members of the public to remove the trees for firewood. This fall, we plan to remove the dead trees from Norris Campground in the same manner. No major removal is contemplated for 1985.

PHYSICAL SCIENCE ISSUES

EARTH SCIENCES

Currently basic research is a healthy mix of programs and individual investigations conducted by university, U.S. Geological Survey (USGS), and NPS scientists. These studies, largely supported by interim funding from NPS and USGS, are gradually refining our knowledge of important processes and systems within the largest and potentially most hazardous volcanic system in North America. For example:

- Rapid uplift within the Yellowstone Caldera: When did it start? Is the rate changing? Is it a precursor to increased volcanic activity? How is it affecting ecosystems?

- Seismic activity: How is it related to uplift? Does it signify emplacement of magma? How does it regulate geothermal activity? Can we forecast large earthquakes such as the M 7.5 event in 1959?

- Geothermal systems: How do the waters circulate? Are there connections across the boundary with areas of geothermal leasing? How are changes related to uplift and earthquake activity? How can we forecast hydrothermal explosions?

ISLAND PARK GEOTHERMAL AREA (IPGA)

Leasing activity is constrained by the IPGA EIS of 1980, which states that Federal leasing must wait until the Secretaries of Interior and Agriculture concur that there would be no adverse impacts on Yellowstone's unique thermal features. The Melcher Amendment of 1984 may offer some additional protection on approximately 28,000 acres in scattered tracts more than 2.5 miles from the boundary. It states that "Notwithstanding any other provision of law, the Secretary shall not issue any geothermal lease pursuant to the Geothermal Steam Act of 1970 in the Island Park.(sic) Known Geothermal Resource Area adjacent to Yellowstone National Park." The amendment does not relieve the pressure on Island Park. Leasing has already occurred on over 24,000 acres of private and state lands, and other federal lands on the boundary within the IPGA are still open to lease application.

OIL AND GAS LEASING

More than 30,000 acres of federal land in the Gallatin National Forest are under lease for oil and gas along the park boundary near West Yellowstone. Even larger areas are under lease application in the Washakie Wilderness and the Targhee National Forest. Leases issued during the past four years lie on the park boundary, contain no stipulations protecting resources in Yellowstone National Park, are located within an area of the highest earthquake risk category, and if developed will extract hydrocarbons from park lands. Baseline ecosystems studies are needed all along the boundary in advance of drilling.

YELLOWSTONE RIVER TURBIDITY

In 1985, NPS will carry out a study of suspended sediment and turbidity in the Yellowstone River between the headwaters in the Lamar River drainage and Livingston, Montana. The goals of the study are to identify sources and amounts of sediment carried by the river and to learn the mechanisms of sediment input. The study is in response to concerns expressed by the Livingston Chapter of Trout Unlimited, who have stated their willingness to partially fund the work.

MINING

Mining activity has increased near the park in recent years with the anticipated reopening of the Jardine Mine by Homestake Mining Company and renewed interest in open pit mining at Daisy Pass near Cooke City. When mining was in full operation in the 1930's and 1940's, Bear Creek and Soda Butte Creek were severely impacted by acid mine drainage. Although some baseline studies have been done, additional studies are needed in these and other drainages potentially affected by mining activity.

ACID DEPOSITION

Since June 1980, NPS has operated a National Atmospheric Deposition Program station in Yellowstone at Tower Ranger Station. The mean value of precipitation acidity has remained near pH 5.6 over the years, but episodes as low as pH 4.4 have occurred. Some high country lakes in Yellowstone may be susceptible to episodes of low pH.

NPS CONSTRUCTION

FEDERAL LAND HIGHWAY PROGRAM (FLHP)

Many of the roads in Yellowstone are in a deteriorated condition and are scheduled to be rehabilitated over the next ten years under FLHP. There are two projects which will have an impact on the visitors over the next few years.

Construction began on the South Entrance road during the summer of 1983 with repairs to the base and drainage structures along the road. The construction continued into the 1984 visitor season and will be completed in 1985. Only minor delays are expected to complete the road shoulder, striping, and guardrail. In addition to the normal Federal Highways roadwork, Fishing Bridge intersection will be realigned to provide left turn lanes and improve traffic flow by the National Park Service.

The next major road section which will be worked on will be Craig Pass, from the West Thumb Junction over to Old Faithful. The design work began in 1984 with the construction expected to be after the 1986 fiscal year.

NPS ROAD PROGRAM

In addition to the FLHP program, the National Park Service expends approximately $900,000 on road rehabilitation yearly with NPS crews. This year's construction will be concentrated in the north end of the park with a three mile section of road between Mammoth and Tower Junction. This road construction will cause minor delays to traffic throughout the summer.

PARK RESTORATION AND IMPROVEMENT PROGRAM (PRIP)

The National Park Service will expend $1.5 million on PRIP projects this year in Yellowstone. Projects include rewiring of quarters and historic structures, reroofing, historic structure rehabilitation and painting, as well as miscellaneous roadside and bridge work. This program, over the past four years, has gone a long way toward correcting many of the health/life safety deficiencies facing us.

CONCESSION FACILITY UPGRADE

Since 1980, the National Park Service and TW Services have been involved in a major facility rehabilitation program. The projects are generally directed toward correcting health and life safety deficiencies, code violations, sanitation problems and deterioration of historic buildings. The types of projects that have been completed to date include extensive rehabilitation of four major kitchens, two new dorms and rehabilitation of eleven existing dorms, structural rehabilitation to various buildings, fire detection/suppression systems as well as a variety of other projects too numerous to list here. Two of the more obvious projects are the new lobby/dining improvements at the Lake Hotel and reshingling of the Old Faithful Inn. Through 1985, the National Park Service has expended over $27 million and TW Services over $13 million on these improvements.

More recently under a contract with Edsall Construction of Bozeman, Montana, the NPS is spending $7.8 million to replace five major boiler plants and construct a new centralized laundry facility. This project began in the fall of 1984 with completion scheduled for the spring of 1986; and will greatly improve heating plant efficiency, reduce air pollution, and allow us to remove intense service functions from the center of visitor accommodations. In the fall of 1985 work will begin on the rehabilitation of the Old Faithful Lodge and Roosevelt Lodge kitchens at a cost of $2 million.

This summer work will begin on improvements to the North Entrance and Gardiner, Montana, water system to provide additional fire protection and service to the new laundry facility.

Hamilton Stores will be constructing a new employee dorm at the Tower Fall area this summer.

VISITOR USE

During the summer season we operate six visitor centers seven days a week. Through these visitor centers, we provide information to over 1.2 million visitors annually. We also contact over 400,000 visitors through guided walks and evening programs. We have virtually completed a plan that outlines various improvements for the future regarding visitor centers, wayside exhibits, and other interpretive activities. The objective of the plan is to greatly improve the education opportunity for the park visitor regarding the remarkable ecosystem of Yellowstone.

Yellowstone will continue to honor Grand Teton's entrance receipt with permits valid for 7 days.

Registration systems will vary throughout the park's campgrounds during the coming season as we move toward personal fee collection systems. Camping fees will remain $6.00 or $5.00 depending on the services available with the exception of group and hiker/biker rates increasing from $1.00 to $2.00 per person, per night.

The charge for boat permits will remain the same: $10 for motorized vessels and $5 for non-motorized vessels. We will honor Grand Teton National Park's permit and issue a non-fee tab.

The annual Commercial Use License fee will be $50 instead of $25.

We hope this summary will prove helpful. Detailed information can be obtained on any issue upon request.

Sincerely,

Robert D. Barbee
Superintendent

STATEMENT OF
R. MAX PETERSON, CHIEF
FOREST SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

At An Oversight Hearing Before The
Subcommittee on Public Lands, and
Subcommittee on National Parks and Recreation
Committee on Interior and Insular Affairs
United States House of Representatives

Concerning Management Issues Relating to the
"Greater Yellowstone Ecosystem"

October 24, 1985

MR. CHAIRMEN AND MEMBERS OF THE SUBCOMMITTEES:

I appreciate the opportunity to participate in this hearing on management issues relating to the "Greater Yellowstone Ecosystem." We are well aware of the high degree of public interest in the management of the outstanding natural resources and features of this area. We believe the interagency cooperative management in this area has been successful.

The many and special values of the Yellowstone area became well known to early trappers and prospectors. Their enthusiastic and colorful accounts of the area's resources led to a detailed Federal survey in the mid-1800's. A great amount of national publicity followed, and in 1872, Yellowstone was established as the Nation's first National Park, representing the initial Federal management presence in the Yellowstone area. This was followed in 1891 by the establishment of the Yellowstone Timber Land Reserve, created for the production of timber products and the protection of watershed resources. The Reserve was the forerunner of the Nation's first National Forests--the Teton, Shoshone, and Targhee in the late 1800's.

Portions of seven National Forests, established during the period 1897 to 1908, are located within the Yellowstone area. These include the Gallatin, Custer and Beaverhead National Forests in southeastern Montana; the Shoshone, Bridger, and Teton National Forests of western Wyoming; and the Caribou and Targhee National Forests in eastern Idaho. These National Forests are managed according to multiple-use and sustained-yield principles which provide for the use and protection of the land and resources.

In addition to Yellowstone National Park and the seven National Forests, the Yellowstone area also includes the National Elk Refuge in Jackson Hole, Wyoming, which was created in 1912 as a result of public interest in the survival of the resident elk herd; the Red Rock Lakes National Wildlife Refuge which was established in 1935 for the protection of trumpeter swans; the Grand Teton National Park; and the John D. Rockefeller Memorial Parkway.

Land Ownership Patterns

Land ownership within the Yellowstone area is largely Federal. This includes lands administered by the Forest Service, National Park System, Bureau of Land Management, U.S. Fish and Wildlife Service, and Bureau of Reclamation.

Some State and privately owned lands are interspersed among Federal lands, but most are along the periphery or are located along major roads and drainages. The limited amount of private land has resulted in an economy that is heavily dependent upon uses and resources from Federal lands.

- Local residents use Federal lands as well as State lands almost exclusively for most of their outdoor recreation.
- The livestock industry utilizes forage from National Forests to support viable year-round operations.
- Local lumber mills and many small family-owned operations that supply posts, poles, mine props, house logs, and fuelwood are dependent upon National Forests as a source of timber.
- Commercial outfitters and guides use federally managed land and water for a large portion of their operations.

Natural Resources, Their Management and Use

The Forest Service recognizes and is sensitive to the outstanding natural resources within the Yellowstone area. The area is rich in natural, cultural, and recreational resources.

The National Forests have spectacular scenery. Perennial snowfields, numerous green meadows, alpine and glacial lakes, and a very diversified vegetation mosaic are some of the many visual attractions.

National Forests offer a wide range of recreational opportunities, particularily those associated with undeveloped recreational qualities. Developed recreation in the private sector, including ski resorts, lodges and other facilities, is of national importance. A number of outfitters and guides offer services for day and overnight trips for hunting and fishing, whitewater rafting and boating.

Designated wilderness on National Forests totals over 4 million acres, or 30% of the National Forest System lands involved. Wilderness areas are used for hunting, pack trips, fishing, horseback trips, mountain climbing and day hiking. The objective of wilderness management is to protect wilderness values.

National Forests in the Yellowstone area support large and varied fish and wildlife populations including such wildlife species as the Rocky Mountain Elk and Rocky Mountain Bighorn Sheep. Major populations of moose, mule deer, bear and pronghorn antelope, in addition to hundreds of species of small and nongame animals, also occur here. Loss of big game habitat and winter range on some private lands and the high economic value of big game hunting have increased the importance of the National Forest in supporting wildlife populations. The National Forests also contain significant acreages of riparian and aquatic habitat which are highly productive and have diverse lifeforms, including several blue ribbon trout streams. Wildlife species on these lands which are listed as endangered or threatened include the northern bald eagle, peregrine falcon, Kendall Warm Springs dace, grizzly bear, and whooping crane.

A comprehensive program is necessary for the management of essential habitats for these threatened and endangered species. Survival of many, including the grizzly bear, is contingent upon habitat from Yellowstone National Park and the adjacent National Forests. To further the grizzly bear recovery effort, some 1.6 million acres of the Bridger-Teton, Shoshone, Gallatin, Custer and Targhee National Forests have been designated as Situation I Grizzly Habitat, where highest management priority is given to maintenance and improvement of grizzly habitat and grizzly-human conflict minimization. Approximately 16% of the total National Forest lands in the area are in Situation I. An additional 2.3 million acres of Yellowstone and Grand Teton National Parks have likewise been designated Situation I Habitat, making a total of almost 4 million acres of Federal Situation I Grizzly habitat.

Livestock grazing is among the oldest of historical land uses on the National Forests. Most of the social and economic structure of the area is tied directly to ranching and farming. Many of the surrounding communities were built on that economic base. A majority of the local livestock ranches depend upon National Forest ranges for livestock summer range to round out their operations. Other industries such as tourism, mining, timber, oil and gas exploration, and recreation have added to that base.

National forests of the Yellowstone area contain important commercial forest lands. These forests produce timber products for the local timber industry and are, at the same time, managed for diversity of habitat. The presence of damaging insects and disease has been a major concern in managing the forest resource and threatens the natural beauty of the forests and parks. Mountain pine beetle has historically inflicted extensive damage in mature and overmature stands of lodgepole and whitebark pine. There are also serious infestations of spruce budworm in stands of Douglas fir, and dwarf mistletoe is common in lodgepole pine. Silvicultural activities offer one of the best long term solutions to minimize damage from such insect epidemics.

The Forests also contain the headwater tributaries of three major river systems that flow into three major drainages (Pacific Ocean, Gulf of California, and Gulf of Mexico). The National Forest watersheds contribute to the Yellowstone, Gallatin, and Madison Rivers on the north, and the Clarks Fork of the Yellowstone, the Shoshone and Grey Bull

Rivers on the east which are tributaries of the Missouri River system. To the south and west originate the Snake and Henrys Fork Rivers of the Columbia River system. Flowing to the south, the Green River begins its journey to the Colorado. These waters have been found to be nearly pristine in quality and are utilized to meet a variety of demands including downstream agricultural use, campground water supplies, and recreation boating. The lakes and streams on the National Forests offer outstanding fishing.

Mining claims are concentrated on the north and east portions of the Yellowstone area where gold, silver, platinum, palladium, copper, sulphur, lead, and molybdenum are found. Geothermal energy potential may exist to the west and north of the Park. Concern has focused on the potential effects that geothermal development might have on the geysers and other thermal features of Yellowstone Park.

Large areas of the National Forests have geologic formations and structures with potential for the production of oil and gas. National Forests on the southern portion of the Yellowstone area lie within the overthrust belt, a geologic region of folded and faulted rock strata which may contain nationally important quantities of oil and gas.

Socioeconomically, one of the most significant aspects of the Yellowstone area is its recent growth in response to tourism and energy development. Increases in the tourism, mining, and energy industries have produced an economic expansion in the region with the regional population growing faster than the national average. Although the population is growing, the overall character of the region remains much the same. The density of the population remains sparse with a large percentage of personal income supplied by agriculture.

Three separate economic regions exist within the Yellowstone area, and they display sharply divergent economic characteristics. The Wyoming portion of the area enjoys more economic activity from recreational travelers because of its location and access routes to popular attractions in Yellowstone and Grand Teton National Parks and the adjacent National Forest lands. Although tourism and ranching have historically been the major industry, energy development is becoming increasingly important to the region's economy. Logging and wood processing have historically contributed to the area's economic stability.

The Idaho portion also receives some benefit from recreational travelers; however, farming and food processing are more important industries. Less favorable access to the area's recreational attractions and the dominance of agriculture have kept the Idaho counties' tourist-serving industries from gaining in economic significance. Logging is also important in this area due partially to timber salvage programs implemented to combat the mountain pine beetle infestation.

The Montana portion has a somewhat depressed agricultural economy similar to other areas of the Nation. An exception is Gallatin County which has a significant recreational industry. Most of this economic region does not share the level of prosperity from tourism or agriculture which is enjoyed in either of the other two socioeconomic portions of the Yellowstone area.

Complementary Nature of Some Resource Uses and Potential Conflicts Among Others

It should be recognized that the Federal land management agencies represented in the Yellowstone area have distinctive missions designed to provide varying goods and services as mandated by Congress. However, activites and policies of the various land management agencies are often complementary. For example, big game hunting is of great importance to the area both from a recreational and economic perspective. The ability to hunt on National Forest lands helps maintain big game populations at levels in balance with the carrying capacity of the area. Stable big game populations promote stable local economies which are dependent upon recreational use such as outfitting and guiding. In addition to hunting, National Forests provide habitat and forage to support and complement big game herds that migrate from other lands, particularily Yellowstone and Grand Teton National Parks. The multiple-use philosophy, under which the National Forests are administered, provides considerable flexibility to manage wildlife habitats in a manner which enhances the big game population of the Yellowstone area. National Forest management plans have management prescriptions designed to maintain or improve wildlife habitat in these areas. These plans tie to allotment management plans on areas open to livestock and include provisions for meeting the forage needs of the indicated levels of wildlife.

National Forest Wilderness Fire Management Plans also complement the natural ecological process by allowing wildfire to assume its natural role, where this can be done without jepardizing safety, private property and important multiple-use values. These plans are coordinated with National Park objectives so that prescribed or natural fires that remain within prescription may cross jurisdictional lines to meet the same ecological goals. These cooperative ventures have been in effect for several years. Future applications will include the use of fire for natural ecosystem maintenance in some nonwilderness areas.

Developed campgrounds on National Forests help meet overall public demand for recreation sites within the area by satisfying the needs of the public traveling to destinations outside the area and by providing campground space to overflow users from the National Parks. Information and education programs are multi-agency and supported through local Chamber of Commerce centers.

While many resource uses are in harmony and mutally supportive, other uses can potentially conflict. Activities that sometimes conflict include timber harvest, energy exploration and development, recreational camping, and grizzily bear activities. Problems are also sometimes created by transient animals and plants such as buffalo, noxious weeds, and insects.

Timber harvest may conflict with other agency management objectives from a visual perspective or in an ecological sense. Most significant is roading associated with the removal of timber products. Roads provide access to previously undeveloped areas and may affect wildlife populations, hunting, fishing, migration corridors, or outfitter operations. Mitigation measures, such as effective road closures, normally minimize these potential effects.

Energy exploration has many of the same potential conflicts as roads and timber harvests. Development may include high density well drilling, access roads, utility and pipeline corridors, and numerous other facilites for shipping the product.

Grizzly bear conflicts with other uses and activities are of high concern. These conflicts may result in the death of the bear or curtailing of its habitat. These conflicts may occur because of recreational use, mistaken identity with black bears during the hunting season, poaching, or improper care or storage of food and garbage at small towns and campsites. Conflicts may also be associated with livestock grazing timber harvesting, and associated activities in essential habitat.

Transient plants and animals cross administrative boundaries into which the control or management of that organism may differ. Buffalo, and to some extent elk, may carry brucellosis and infect livestock on adjacent areas requiring State quarantines. Noxious weeds and exotic plants or animals may not be treated by one jurisdiction, creating problems for other jurisdictions where control efforts are undertaken. Endemic populations of insects such as the mountain pine beetle may reach epidemic proportions which, if not prompty treated, can spread throughout the area, and exceed the capability of localized attemps at control.

Coordination and Cooperation Among Federal Land Managers

During the 1950's, it became increasingly apparent to Federal land managers that an effective coordination mechanism was needed for the Yellowstone area. The Greater Yellowstone Coordinating Committee was established in the early 1960's to meet this need. Committee membership includes the Regional Foresters of the Northern, Rocky Mountain, and Intermountain Regions of the Forest Service; the Rocky Mountain Regional Director of the National Park Service; the Superintendents of Yellowstone and Grand

Teton National Parks; and the Supervisors of the Gallatin, Targhee, Beaverhead, Custer, Shoshone and Bridger-Teton National Forests. The entire Committee meets during the fall of each year while the Forest Supervisors and Park Superintendents hold an additional winter meeting. Other units of Federal, State and local governments are invited to interact with the Committee on matters of mutual interest and concern. Field coordination trips are also held annually. Results of these trips include: agreements on exchanging trail maintenance, uniform signing adjacent to Park lands and National Forest Wilderness, procedures for either agency to issue camping permits, and unified approach to solving trespass and violations.

The Committee has provided the framework for the identification and successful resolution of a wide range of coordination needs over the past two decades. Some examples include:

- Development of the Greater Yellowstone Grizzly Bear Guidelines in 1974 which have been universally accepted as the primary source for management considerations involving the grizzly bear.
- Development of the "Bear Us in Mind" grizzly bear educational campaign in 1982 which was designed to minimize the potential for grizzly bear/human conflict and raise the public's awareness of the special grizzly areas. We plan to implement phase II of "Bear Us In Mind" which has been identified by the Interagency Grizzly Bear Committee as a high priority program.
- Development of an "Outfitter Policy for the Greater Yellowstone Area" which established guidelines for dealing with outfitters, guides and organized group activities in the Yellowstone area.
- Completion of Elk Management Studies which are directed towards the establishment and maintenance of healthy elk populations in the Yellowstone area.
- The Greater Yellowstone Regional Cooperative Transportation Study in 1978 which examined the existing and projected regional transportation system.

Other coordination needs addressed by the Committee over the years include such diverse matters as snowmobiling policy, off-road travel policy, locations of gravel pits for road construction and management, maintenance of visual qualities, development of public accommodations, land use planning, an avalanche warning system, wilderness management and air quality monitoring. In addition to the numerous coordination efforts successfully initiated through the formal mechanism of the Coordination Committee, there are many other instances of interagency cooperative efforts to meet specific program needs within the Yellowstone area. Examples of this cooperation include:

- Development of the Bald Eagle Management Plan for the Greater Yellowstone Ecosystem to promote recovery of the bald eagle.
- Completion of the Island Park Geothermal Environmental Impact Statement in 1980 which concluded that the Secretary of Agriculture would not consent to geothermal leasing on National Forest lands until the Secretary of the Interior determined that geothermal development would not adversely affect the unique thermal features of Yellowstone National Park.
- Development of the Whiskey Mountain Bighorn Sheep Management Program for the management of the largest herd of Bighorn Sheep in the lower 48 States.
- Interagency Cooperative Law Enforcement Program to control poaching of grizzly bear on the National Forests and National Parks.

We plan to continue our participation in the Greater Yellowstone Coordinating Committee and recommend to the Committee that the membership be expanded to include representation from each State. In addition, the Department of Agriculture will continue working with the Department of the Interior on the Park Protection Working Group.

The past several years have seen increased concern and activity related to the recovery of the grizzly bear which is listed as a threatened species in the 48 conterminous States. This led to a revision and expansion of the Interagency Grizzly Bear Committee (IGBC) through a 1984 Memorandum of Agreement between the Secretary of Agriculture and the Secretary of the Interior. This agreement recognized the need for all Federal and State agencies with responsibilities for the grizzly bear to coordinate their management and research actions.

The ten member Interagency Grizzly Bear Committee includes three Regional Foresters, Forest Service; a Regional Director, National Park Service; a Regional Director, U. S. Fish and Wildlife Service; the Bureau of Land Management State Director for Montana; and representatives of the States of Idaho, Montana, Wyoming, and Washington as named by the appropriate governor. A Subcommittee of the IGBC has been named to deal specifically with recovery efforts in the Yellowstone area. Representation on this subcommittee includes the five Forest Supervisors, Yellowstone and Grand Teton Park Superintendents; and State representatives from Wyoming, Montana and Idaho and the U.S. Fish and Wildlife Service. The Subcommittee focuses its attention on the implementation of management actions in a coordinated fashion within the ecosystem as well as identifying research needs and financial needs for management. Efforts of this type look at specific issues and their relationships to the entire Yellowstone area. We are proud of the accomplishments of this group and will continue to be an active participant.

The Grizzly Bear Cumulative Effect Model for the Yellowstone area is in its second year of development under the leadership of the Interagency Grizzly Bear Committee. Once completed, it will be utilized on all Forests in the Yellowstone area to provide the land managers with better data on grizzly bear habitat and to assess the potential effects of proposed activities. This will provide land managers better information upon which management decisions can be made.

Initiatives to Be Undertaken/Anticipated Results of Proposed Management

Extensive coordination efforts have been and are underway in conjunction with the development of Forest Plans for the seven National Forests in the Yellowstone area. This involves frequent and ongoing contacts with the National Park Service, Fish and Wildlife Service, Bureau of Land Management, State agencies such as Fish and Game Departments, and a wide range of interested organizations and private citizens. As a result of these coordination and public involvement activities, we are confident that the plans will be responsive to the high level of interest and concern for the special values of the Yellowstone area. We believe the coordination processes now in place have enabled land managers in the Yellowstone area to effectively identify and deal with the broad range of coordination needs which have been surfaced over the past several decades. We are confident that existing processes, with continued emphasis and fine tuning, will be adequate to assure coordinated management of the Yellowstone area. In addition, to increase the viability and future direction for the National Forests in the Yellowstone area, we plan to:

1. Designate the Regional Forester of the Rocky Mountain Region with primary responsibility for overall Forest Service coordination within the Yellowstone area. He will continue to work closely with his Regional counterparts in the Park Service and Fish and Wildlife Service.
2. Upon completion of the first round of National Forest Planning, we plan to aggregate existing National Forest management plan information into an overview of the Yellowstone area. As we move toward the 21st century, it is important that all of us coordinate our planning activities. We will seek input from the Park Service, Bureau of Land Management and the Fish and Wildlife Service. We will also ask the States of Idaho, Montana, and Wyoming to participate in developing this overview. We believe this is a solid approach to comprehensive management of the area.
3. In cooperation with the States, we intend to give priority to implementing wildlife and fisheries habitat improvements identified in the forest plans. Habitat improvement work for grizzly bear will be accelerated on identified high priority areas.

In summary, we feel that this special place, "The Yellowstone Area," has been a model for interagency cooperation and management. We expect our managers to be fully cognizant of the national values of the area and to exercise care and sensitivity in their decisionmaking. We take pride in the management of the area, the close working relationships with the other governmental agencies, the responsiveness to local and national needs, and serving the public as professional resource managers.

Mr. Chairmen, this concludes my formal presentation. I will be pleased to answer any questions you or the members of the committee may have.

FINAL ENVIRONMENTAL IMPACT STATEMENT LEASING AND DEVELOPMENTAL ISLAND PARK GEOTHERMAL AREA FREMONT CO. IDAHO, GALLATIN CO. MONTANA, TETON CO. WYOMING

LEAD AGENCY	USDA - FOREST SERVICE INTERMOUNTAIN REGION 324 - 25th STREET OGDEN, UT 84401
COOPERATING AGENCIES	USDA - FOREST SERVICE NORTHERN REGION FEDERAL BUILDING MISSOULA, MT 59807
	USDI - BUREAU OF LAND MANAGEMENT 550 W. FORT STREET, BOX 042 BOISE, ID 83724
	USDI - FISH AND WILDLIFE SERVICE ECOLOGICAL SERVICES 4620 OVERLAND RD BOISE, ID 83705
	USDI - U.S. GEOLOGICAL SURVEY CONSERVATION DIVISION & WATER RESOURCES DIVISION 345 MIDDLEFIELD ROAD MENLO PARK, CA 94025
	USDI - NATIONAL PARK SERVICE YELLOWSTONE NATIONAL PARK YELLOWSTONE NATIONAL PARK, WY 82190
RESPONSIBLE OFFICIALS	
(FOR INTERMOUNTAIN REGION NATIONAL FOREST LANDS)	VERN HAMRE, REGIONAL FORESTER 324 - 25th STREET OGDEN, UT 84401
(FOR NORTHERN REGION NATIONAL FOREST LANDS)	CHARLES T. COSTON, REGIONAL FORESTER FEDERAL BUILDING MISSOULA, MT 59807
(FOR BUREAU OF LAND MANAGEMENT LANDS)	ROBERT O. BUFFINGTON, IDAHO STATE DIRECTOR 550 W. FORT STREET BOISE, ID 83724
FOR FURTHER INFORMATION CONTACT:	JOHN M. BELAND, RESOURCE COORDINATOR TARGHEE NATIONAL FOREST 420 N. BRIDGE STREET ST. ANTHONY, ID 83445 (208 624 3151)

ABSTRACT: This final environmental impact statement describes seven alternatives for leasing 488,031 acres of Federal lands in Idaho, Montana, and Wyoming. The statement describes the estimated effects of a geothermal leasing program by the various alternatives. Alternative 7 is the selected alternative. It integrates many substantive public comments on three major concerns: Yellowstone National Park, wildlife, and fish.

TIMING AND RIGHT OF APPEAL: A notice of appeal must be filed within 45 days from the date of the Record of Decision (36 CFR 211.19).

SUMMARY

FINAL ENVIRONMENTAL IMPACT STATEMENT

LEASING AND DEVELOPMENT

ISLAND PARK GEOTHERMAL AREA

FREMONT CO. IDAHO, GALLATIN CO. MONTANA, TETON CO. WYOMING

I. Description

This environmental impact statement considers the effects of geothermal leasing and development on 488,031 acres of public land in Idaho, Montana and Wyoming administered by two Federal agencies: the USDA – Forest Service and the USDI – Bureau of Land Management. The lands considered are known collectively as the Island Park Geothermal Area (IPGA) and contain two areas classified as "Known Geothermal Resource Areas" (KGRA) by the U.S. Geological Survey.

Approximately 200 lease applications have been received for geothermal exploration and development within the Island Park Geothermal Area. These applications are outside the two designated Known Geothermal Resource areas and would be leased noncompetitively if leasing is approved.

Major considerations of a geothermal leasing program within the Island Park Geothermal Area include:

– Potential effects on surface and groundwater resources.

– Potential effects on threatened and/or endangered wildlife species.

– Proximity to Yellowstone National Park and its surface hydrothermal features.

– Economic and social effects.

II. Alternatives Considered

Alternative 1 – No leasing.

Alternative 2 – Leasing as proposed by participants of the public workshop.

Alternative 3 – Lease a portion of the area. Defer leasing on a portion and refuse leasing on some of the lands.

Alternative 4 – Lease most of the area, but much of the available lands would be restricted to no surface occupancy restrictions.

Alternative 5 – Allow leasing on a large portion of the area, but restrict some of this to surface occupancy restrictions, i.e. use of existing roads, use of portable drilling rigs. Deny leasing on environmentally sensitive lands.

Alternative 6 – Lease the entire area.

Alternative 7 – Lease a portion of the area. Defer leasing on a portion including a two mile wide "buffer" strip next to Yellowstone National Park. Refuse leasing on some of the land.

III. Environmental effects

Cause	**Potential Effects**
Exploration and Development	Increased employment relative to the extent of discovery and development
Development of Resource	Additional energy for electricity, space heating and other industrial/agricultural uses
	Alteration of Yellowstone National Park Thermal Features
Operation of Facilities	Air pollution from geothermal gases
	Increased noise and objectionable odors
	Local climatic modifications
	Royalty payments and rent to Federal Government
Construction and Development	Soil erosion and possible mass failures
	Increased man-caused wildfires
	Reduced visual quality
	Destruction of vegetation
	Improved access
	Reduction in timber production
	Increased noise levels
	Stream habitat modification
	Conflict with recreational pursuits
	Obliteration of archaeological/historical sites
	Air pollution from dust and debris burning
	Increased traffic and road maintenance
	Increased tax base for affected counties
	Displacement and disturbance of wildlife
	Possible water degradation from spills, blowouts or casing failures
	Social and economic stress from increased population
	Modification of wildlife habitat
Environmental Studies	Additional resource data for future management decisions

IV. Date of Transmission to EPA and the Public: Draft - March 21, 1979
Final JAN 15 1980

RECORD OF DECISION

ISLAND PARK GEOTHERMAL AREA
IDAHO-MONTANA-WYOMING
FINAL ENVIRONMENTAL IMPACT STATEMENT
USDA, FOREST SERVICE

e Island Park Geothermal Area Environmental Impact Statement has been an interagency project since its eption in 1975. The data and evaluations contained in the final EIS reflect this interagency participation.

sed on the analysis and evaluation in the final EIS for the Island Park Geothermal Area, it is our decision to opt Alternative 7 as the selected alternative subject, however, to the limitation that the Secretary of riculture's consent to the leasing of National Forest lands, which has been delegated to Regional resters, will not be given until the Secretary of the Interior in consultation with the Secretary of Agriculture termines the following:

- that a valuable geothermal resource exists within the IPGA based upon research or tests such as drilling, geophysical and geochemical data interpretation or other indicators
- development of the potential geothermal resource in the Island Park area will not adversely affect the unique thermal features of Yellowstone National Park
- development would not adversely affect habitat of threatened or endangered wildlife
- any potential air or water pollution from hydrogen sulphide or other noxious gases can be controlled so as not to adversely affect soil, water, vegetation, or air quality in areas of human habitation.

pon receipt of favorable findings on these four areas of concern, the Secretary of Agriculture will prescribe lease rms and conditions needed to ensure adequate protection and utilization of the affected lands. The Secretary f Agriculture's consent, terms, and conditions will be consistent with the selected alternative (Alternative 7) of is final Environmental Impact Statement.

he selected alternative most fully addresses the major public concerns: the protection of the thermal atures of Yellowstone National Park and protection of wildlife and fish and their habitats. The final EIS escribes (Section IV) seven alternatives. These alternatives differ as to the acreages available for leasing, the me frames for leasing, and/or the acreages available for surface occupancy. Except for Alternative 1 (no asing), the selected alternative is considered to be environmentally preferable.

his decision represents a proposal for geothermal leasing based on the management responsibilities of the JSDA, Forest Service, and the USDI, Bureau of Land Management (surface management agencies). It is lso responsive to the Geothermal Steam Act of 1970.

mplementation of this decision will not take place sooner than 45 days after the final EIS and this Record of Decision have been filed with the Environmental Protection Agency and made available to interested individuals, organizations, and agencies.

This decision is subject to administrative review (appeal) pursuant to 36 CFR 211.19. Any notice of appeal filed should be received within 45 days from the date of this decision.

Vern Hamre

JAN 15 1980

VERN HAMRE, Regional Forester
Intermountain Region
USDA-Forest Service
324 25th Street
Ogden, Utah 84401

Date

Tom Coston

JAN 15 1980

CHARLES T. COSTON, Regional Forester
Northern Region
USDA-Forest Service
Federal Building
Missoula, Montana 49807

Date

2/6/86

Chief Peterson's additions for Yellowstone transcript. (p.)

Questions and Answers

1. Has Forest Service in the last 5 years objected to a lease? (p.148)

Yes, [illegible] follows

Forest	No.	Acreage	Reasons
Bridger-Teton	88	149,000	Wilderness, Elk Refuge, Krug Memorandum
Targhee	13	25,320	Wilderness
(Gallatin) (Custer)	42	105,682	Wilderness, Study Areas, Earthquake Area
Shoshone	0	0	--
Yellowstone Total	143	280,002	

2. Does Forest Service monitor leases?

Yes, Forest Service is involved in lease issuance, Application to Permit Drilling issuance, monitoring during operation, and in lease closure and rehabilitation. (See attached chart)

3. Expectations on roads for Greater Yellowstone Area?

p.159

For next 10 years the proposal is:

Forest	New Construction	Reconstruction	Closed
Bridger-Teton	100	77	69
Targhee	310	267	299
Gallatin	250	120	259
Custer	10	0	10
Shoshone	40	97	99
Total	710	561	736

4. How much acreage under leased?

See attached Oil and Gas Summary.

5. What % of Forest acreage is not available for leasing?

See attached Oil and Gas Summary.

6. Any new Ski Areas on Forest Service lands?

7. What types and volumes of herbicides and pesticides have been used in the past 5 years?

See attached Pesticide Summary.

8. How many acres of Situation I on the Targhee National Forest will be imported by Timber Harvest? (p. 201)

The final plan and EIS propose to treat 7200 acres during the planning period.

Oil and Gas Summary - Last 5 Years

Forest	Avail. for Leasing (%)	Leased (% of total)	Under APD (% of total)	Impacted by Drilling (% of total)
Bridger-Teton	60.0	40.6	0.008	0.03
Targhee	81.5	38.9	0.006	0
Gallatin	44.5	2.9	0	0
Custer	68.8	9.4	0	0
Shoshone	38.4	19.4	0.002	0.0008
Yellowstone Total	62.0	23.0	0.002	0.008

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Oil and Gas Summary

I. Area Unavailable For Leasing

Forest	Total Acreage	Unavailable for Leasing			
		Total %	Wilderness	MSI Grizzly	Other
Bridger-Teton	3,400,100	1,361,602 - 40%	1,300,637	-	60,965
Targhee	1,642,755	304,243 - 19%	130,535	-	173,708
R-4 Total	5,042,855	1,665,845 - 33%	1,431,172	-	234,673
Beaverhead	2,128,789	261,400 - 12%	259,000		2,400
Gallatin	1,738,056	964,838 - 56%	574,788	188,000	202,050
Custer	1,112,856	347,789 - 31%	345,589	-	2,200
R-1 Total	4,979,701	1,574,027 - 32%	1,179,377	188,000	206,650
Shoshone	2,433,029	1,498,135 - 62%	1,379,048	66,650	52,437
R-2 Total	2,433,029	1,498,135 - 62%	1,379,048	66,650	52,437
Yellowstone Total	12,455,585	4,738,007 - 38%	3,989,597	254,650	493,760

Oil and Gas Activity - Last 5 Years

Forest	Avail. for Lease acres	Leases		AFD's		Well's Drilled (abandoned or Producing)		Problems	
		No.	Acres	No.	Acres	No.	Acres	No.	Acres
Bridger-Teton	2,038,508	1,111	1,381,005	52	260	42	964	1	1/10
Targhee	1,338,512	346	638,610	2	10	0	0	2	0
Gallatin	773,218	32	49,760	0	0	0	0	0	0
Custer	765,065	59	105,030	1	0	0	0	0	0
Shoshone	934,894	289	470,923	13	40	6	18.5	0	0
Beaverhead	1,867,398	113	223,301	0	0	0	0	0	0
Yellowstone Total	7,717,595	1,950	2,868,629	68	310	48	982.5	3	1/10

Pesticide Summary - Last 5 Years

Pesticide - Use	B-T	Targhee	Custer	Gallatin	Shoshone	Yellowstone NF total
Carbaryl-Insecticide	-	2,691	-	4,080	-	6,771
Strychnine-Rodenticide	121	63	-	-	-	184
Picloram-Herbicide	1055	756	-	318	641	2,770
Dicamba-Herbicide	21	12	-	-	145	178
2,4-D-Herbicide	857	4,549	-	442	-	5,848
Picloram + 2,4-D-Herbicides	490	658	-	335	-	1,483
Dicamba + 2,4-D-Herbicides	1097	431	-	3	60	1,591
Picloram + Dicamba-Herbicides	-	75	-	-	-	75
Picloram + Dicamba + 2,4-D-Herbicides	-	21	-	-	-	21
Tebuthiuron-Herbicide	-	-	-	-	4	4
Glyphosate-Herbicide	132	99	-	12	-	243
	3,773	9,355	-	5,190	850	19,168

Statement by Dr. Kenton R. Miller
Director-General
INTERNATIONAL UNION FOR CONSERVATION OF
NATURE AND NATURAL RESOURCES (IUCN)
Before the
Joint Session of the Subcommittees on Public Lands and
on National Parks and Recreation
On the Question of the Greater Yellowstone Ecosystem
October 24, 1985

Mr. Chairman and Committee Members, my name is Dr. Kenton Miller and I serve as Director-General of IUCN, with headquarters in Gland, Switzerland. It is a pleasure to appear before you today to discuss the Greater Yellowstone Ecosystem from an international perspective.

As you will have gathered from the testimony presented by IUCN on 8 October regarding the International Cooperation activities of the Department of the Interior (Appendix 1), IUCN is a global membership organization of over 500 government and non-governmental institutions from 116 countries. IUCN was founded in 1948 to provide independent international leadership for promoting effective conservation of nature and natural resources. The work of the Union is supported by six scientific and technical commissions and three centers dealing with law and policy, species, ecological science, education, planning, parks and protected areas, monitoring and sustainable development. These efforts are based upon the contributions of professional people from all corners of the globe.

Among our regular tasks are found the study, evaluation and monitoring of parks and protected areas, supporting the World Heritage Convention and the Biosphere Reserve Action Plan, and providing technical and policy advice to governments, the United Nations and non-governmental bodies on the wise use of natural resources.

Yellowstone National Park represents a very special place in the history of the worldwide conservation movement. In the words of William C. Everhart, a noted historian and author on the United States National Park Service, "...Yellowstone stands as a preeminent leader of perhaps the proudest parade that mankind ever set in motion - the parade of national parks that began in the United States over a century ago and marched around the world." This truly American innovation and gift to society, the "National Park idea," has now been adopted by 135 nations and is replicated in over 3,500 natural parks and reserves.

Yellowstone was the first instance in history of a nation dedicating a portion of an undisturbed ecosystem for all people to enjoy and for unaltered natural processes to be perpetuated.

Speaking for the international conservation community, British Conservationist Max Nicholson suggests that if one is looking for the origin of the world conservation movement, "...look to the United States...These developments in the United States, during the three closing decades of the 19th century may be said, for the first time in any country, to have put conservation on the map as a serious public issue."

One hundred years after Yellowstone, the United States once again introduced what is recognized as a revolutionary conservation concept into the world community, World Heritage. Beyond the protection of national heritage there are special places in the world that are of such outstanding universal value to humankind that it is an international responsibility to ensure their protection. The concept of certain places as the world's heritage came into being with the U.S. first drafting and then becoming the first nation to ratify the international treaty named the Convention Concerning the Protection of World Cultural and Natural Heritage. Yellowstone again symbolized to the world the first of World Heritage Sites.

The United States nomination of Yellowstone as a World Heritage Site describes the global significance of this area: "As a living evolving record of volcanism, Yellowstone is outstanding... Its hot springs and geysers are the world's largest; the most extensive recognized caldera on earth - 100 times the size of Krakatoa, comprises half of the park. Twenty-seven successive fossil forests, buried by a series of volcanic ash falls over 50 million years, contains a unique record of more than 100 species of ancient trees and shrubs. As an area of rapid geologic change, the region provides a setting for ongoing evolution of some 1,000 species of plants and 57 species of mammals. Yellowstone's geysers are a spectacular concentration of rare worldwide phenomenon. The presence of rare, threatened and endangered species, such as the arctic grayling, mountain lion, grizzly bear, and bald eagle, even perhaps a remnant group of surviving wolves enable Yellowstone National Park to meet all four World Heritage criteria for inclusion as a natural area on the World Heritage List. The park contains six species of ungulates (elk, mule deer, moose, pronghorn, bighorn sheep, bison), two species of bear (black and grizzly) and 4[illegible] other species of mammals including mountain lion and wolverine. The bison herd is the only continuously wild, free-ranging herd in the U.S. whose numbers are naturally regulated.

While a precise count of all the individual thermal features in Yellowstone is virtually impossible, various estimates range from 2,500 to 10,000 depending upon how many of the smaller features are included. The U.S. Geological Survey indicates that this is a greater number than occurs at any other place in the world."

The United States doubled the size of its National Park System with the establishment of new areas in Alaska. This has been reflected by action worldwide -- the number and acreage of protected areas have doubled in the last decade.

The first two world conferences on national parks were celebrated in the United States in 1962 and 1972. The third such gathering of world leaders responsible for protected areas was hosted by a developing country, Indonesia, in Bali in 1982.

One of the ten recommendations contained in the Bali Action Plan is to urge all nations to take steps to ensure that the ecosystems upon which the natural resources of our parks are dependent receive adequate management. This requires that all lands and waters within these ecosystems are treated in ways which preserve those areas which need the most care, and at the same time, husband remaining areas to ensure that all resource productivity is sustainable.

Bali also recommended that protected areas management be envisioned broadly to link parks, forests, sanctuaries and other types of reserved lands to create ecosystem-wide schemes of cooperation to meet the many goals of people while protecting nature and natural resources. The World Conservation Strategy calls for regional and integrated efforts to overcome obstacles to conservation and sustainable development.

The United States and Canada took steps in the direction of ecosystem management with the joint nomination of the

Wrangell-St. Elias/Kluane protected areas as the first international World Heritage Site. This area was established to protect the complete biological and geological system from the Yukon mountain crest to the seacoast. It set a precedent which is now being followed in Latin America and Africa.

The Serengeti and the Great Barrier Reef Marine Park demonstrate how other nations are presently dealing with complex ecological, economic, social and institutional issues. These efforts accept the dynamic realities of ecosystems and of societies.

In hindsight, we now recognize that ecosystems are not square; they are interlocking living systems of energy and nutrient flow interacting with the physical and living environment. In Australia, Costa Rica, Czechoslcvakia, East Africa, India, Indonesia, Peru, and elsewhere, we see cooperative programs being established to deal with ecosystem management. Partnerships, not battle lines, are needed to perpetuate natural systems.

Mr. Chairman, the world is interested and concerned about the state of the Yellowstone ecosystem. I am confident that local citizens living around the Park and the several National Forests and Wildlife Refuges are concerned about the many benefits from the area upon which their livelihood depends.

The activities and actions of the United States to perpetuate this system, while meeting the needs of local people on a sustainable basis, can and will be a model for others to follow. Will the United States once again show leadership in meeting what may well be one of the greatest challenges to the conservation of nature and natural resources in the decade to come? The results will influence conservation and human welfare everywhere.

STATEMENT BY CAMERON H. SANDERS, JR., CONSULTANT TO THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE AND NATURAL RESOURCES (IUCN), BEFORE THE SUBCOMMITTEE ON PUBLIC LANDS, COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, UNITED STATES HOUSE OF REPRESENTATIVES

OCTOBER 8, 1985

INTERNATIONAL UNION FOR CONSERVATION OF NATURE AND NATURAL RESOURCES

IUCN: WHAT IT IS AND WHAT IT DOES

International conservation action by and through IUCN links United States Government conservation agencies, non-governmental organizations, research institutions, and individual scientists, policy specialists and technicians with those in other countries -- developed and developing alike -- in a concerted worldwide effort to identify pressing conservation and renewable resource problems and to work toward their solution in all major areas of the globe.

CONSERVATION IS FOR PEOPLE

The basic principle of saving some of today's resources for tomorrow is understood everywhere. No one has to tell a farmer not to cut down a fruit tree for firewood. Similarly, people worldwide are coming to realize that natural resources must be much more carefully managed if they are to support the ever-growing population and industrial demands of our complex 20th century civilization.

The International Union for Conservation of Nature and Natural Resources (IUCN), founded in 1948, was established by conservation-minded governmental and non-governmental organizations around the world to provide independent international leadership for promoting effective conservation of nature and natural resources. IUCN believes that improved management of natural resources must be based on a firm foundation of science, policy, and legislation, and that a productive, healthy natural world is our ultimate security.

IUCN, working with the United Nations Environmental Program and the World Wildlife Fund, and with the guidance of FAO and UNESCO, produced in 1980 the World Conservation Strategy, to serve as a philosophical -- and practical -- approach which focuses on the necessary interrelationship of conservation and development goals if these are to be achieved. The major objectives of conservation, as reflected in the World Conservation Strategy, are: to maintain essential ecological processes to preserve genetic, i.e., biological, diversity and to ensure that any utilization of species and ecosystems is sustainable. The Strategy defines conservation as "the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet needs and aspirations of future generations." This human orientation to conservation has given IUCN a special credibility with governments in developing countries that are facing increasing resource-population conflicts.

IUCN'S MEMBERSHIP NETWORK

Through its members, IUCN incorporates and represents the conservation concerns of the majority of mankind. The Union has over 500 members, from 116 countries, including: 58 State Members, 123 Government Agency Members, and 350 Non-Governmental Conservation Organization and other institutional Members. From the United States, IUCN has more than 60 members, including the principal US Government agencies concerned with conservation of nature and natural resources (Fish and Wildlife Service, Forest Service, National Oceanic and Atmospheric Administration, and National Park Service), the leading US environmental NGOs, and prominent US academic and research institutions. In this way government authorities responsible for setting conservation policy and carrying out national programs are brought together in IUCN with non-governmental bodies and others who advocate conservation concerns and who have important expertise and programs of their own to contribute to a combined worldwide collaborative effort.

THE IUCN SECRETARIAT

IUCN maintains a small Secretariat in Gland, Switzerland (near Geneva), which operates on a tight budget in conducting and coordinating IUCN's extensive program, with a wide outreach in conservation work around the world. This includes operation of three specialist centres: the Environmental Law Centre in Bonn, FRG, which is the leading information source and repository for national and international legislation, treaties and agreements, and other legal instruments in the environmental field; the Conservation Monitoring Centre (CMC) in Cambridge and Kew, UK, whose staff of 35 operates a data base containing detailed up-to-date information on species, habitats, and protected areas;

and the Conservation for Development Centre (CDC) in Gland, which works with development agencies to design and implement projects which put environmental concerns into action.

The work of IUCN depends upon knowledge and technical experience derived from a volunteer network of over 3,000 scientists, technical and policy specialists, and other experts organized by IUCN into its Commissions and advisory groups. These components of the Union are designed to bring information and guidance to the Secretariat and to implement the programs and projects it develops and promotes. IUCN's six Commissions include: Ecology; Environmental Planning; Education; Environmental Policy, Law, and Administration; Species Survival; and National Parks and Protected Areas. The Secretariat also has full-time professionals working on Tropical Forests, Wetlands, Plants, and Coastal and Marine Resources.

IUCN's membership, Commissions and advisory groups, and the major collaborative organizations and other institutions with which it cooperates provide IUCN with the information and advice on what needs to be done in conservation at the global, regional and local levels; the Secretariat, working with the Centres and the Commission executives, and in consultation with the membership, draws on this information and the expertise available through the IUCN network to formulate conservation priorities and to develop programs and projects for action; implementation of these by the Secretariat and the IUCN membership complete the cycle.

IUCN'S FOUR BASIC ACTIVITIES

-- Monitoring what is taking place worldwide in relation to conservation concerns and drawing conservation requirements to the attention of those who can undertake needed action on the ground. Of particular significance are: the Red Data Book series, internationally recognized as the authoritative source of information on endangered species; and the United Nations List of National Parks and Protected Areas, also the standard reference on the subject. IUCN's Conservation Monitoring Centre also prepares reports to order on the status of particular species and habitats, for the use of the World Bank, UNESCO, UNEP, and others.

-- Planning conservation action which is scientifically sound and realistic in socio-economic terms, using the information obtained through monitoring. In 1985, IUCN has developed a Wetlands Programme for its membership network; it also has developed the World Wildlife Fund Asia Programme, a Programme on Traditional Knowledge for Conservation, the Corbett Action Plan for protected areas in South and Southeast Asia, and national conservation strategies for several countries. A major new effort on "Population, Human Ecology, and

Sustainable Development" has been designed for funding by major foundations and involves providing IUCN's network with the means to address population issues in relation to conservation and to exert an influence in this sector. Also in 1985, IUCN has designed over 100 field projects for more than 10 sponsors (including USAID, WWF, UNEP, WTO, UNESCO, FAO, Rockefeller Brothers Fund, Andrew Mellon Foundation, SIDA, DANIDA, and NORAD).

-- Promoting conservation action by governments, intergovernmental [illegible] and non-governmental organizations. IUCN distributes its own publications (including the IUCN Bulletin, PARKS Magazine, and a series of specialist newsletters and technical works),contributes material for publication by others (including the Smithsonian Institution Press), and directly promotes action through meetings and high-level missions. IUCN works closely with several international conventions, serving as the Secretariat for the Wetlands Convention and providing technical advice for the World Heritage, Endangered Species (CITES), and Migratory Species conventions.

-- Providing assistance and advice necessary for the achievement of conservation action. 1985 examples include: the preparation of an Action Plan for Ecological Rehabilitation in the Sahel; participation in the Ecosystems Conservation Group with FAO, UNEP, and UNESCO; collaboration with the US National Park Service on a series of cooperative agreements for field projects in developing countries; and assisting USAID in a mid-term project review.

Testimony of

Franz J. Camenzind, Ph.D.

Mr Chairman, members of the subcommittee, my name is Franz Camenzind. I am a privately employed ecological consultant and live in Jackson, Wyoming. Thank you for the opportunity to comment on behalf of the Greater Yellowstone Ecosystem. I would like to speak briefly about ecology, ecosystems, ecosystems management as well as about the Greater Yellowstone Ecosystem.

Ecology literally means the study of the "house" or place where a plant or animal lives (its habitat or environment). This includes the soil, water and climate as well as the living or "biotic" components. Ecosystem refers to the workings, the dynamics (or interrelationships) of all the parts of the "house", how the plants and animals live in, adapt to, and alter their habitat.

These are not new terms, these words, the very business of ecology has been around for over a hundred years and the concept of the interrelatedness of the living and nonliving elements of our planet has been recognized for centuries. And of course, ecosystems themselves have been in existance since the begenning of the planet, it has just taken us a while to recognize them.

We should think of ecosystems as a living entities made up of all the living (plants and animals) and nonliving (air, soil and water) components interacting with one another. (The energy required to fuel ecosystems comes from the sun.) The more parts there are to the ecosystem, the more complex the interrelationships become and generally, the more complex an ecosystem, the less likely it is to suffer great break downs. For example, in the original tall grass prairies of what is now Iowa, there were dozens of plant species per acre and if a particular plant disease infected one of these species, little if any production would have been lost on the site because the other species would have responded to the vacancy caused by the disease and would have expanded and increased their own productivity. The ecosystem was complex and relatively stable.

Contrary to this, artifically simplified systems (single-species agriculture) are extremely vulnerable to environmental fluctuations and are very dependent upon intense management to maintain their productivity. Today, if a plant disease were to hit Iowa's corn crop (the only species now growing on these same lands), production for that land would be virtually wiped out- there would be no other species that could by itself take the place of the corn and maintain production on the site. The site is now ecologically simple and potentially very unstable. This is just one example of how complete ecosystems can take care of themselves, survive and even thrive during virtually any natural fluctuation.

With the Greater Yellowstone Ecosystem we have the largest relatively complete ecosystem of its kind remaining in the world. Most of the original pieces are still in place, albeit in somewhat modified densities and distributions. Many of the interactions go on with little disturbance from mankind. Most of the biotic components exist with only modest management support, most can survive within the area of the Greater Yellowstone Ecosystem.

The Greater Yellowstone Ecosystem occurs within and is a part of what I refer to as the Greater Yellowstone Region, an area of approximately 18 million acres of wild and semi-wild land characterized by environmental similarity and geographic continuity. But this is where the inherent order so conspicuous within the ecosystem breaks down, for within this Region are over 25 different political units, each with different jurisdictions and each with different ideas as to how best to utilize and manage the unparalleled natural resources of the region. It is composed of portions of three states, six National Forests from three rigions, two National Parks, two Natinal Wildlife Refuges, numerous parcels of state and BLM lands and thousands of acres of private land.

To make matters worse, the boundaries which delineate these lands almost completely disregard ecological boundaries. For example, the boundaries of Yellowstone National Park were determined by the following criteria; the northern boundary was established as the east-west line intersecting the junction of the Gardner and Yellowstone Rivers, the eastern boundary followed the north-south line which passed exactly 10 miles east of the eastern most edge of Yellowstone Lake, the southern boundary followed the line 10 miles south of the southern most shore of Yellowstone Lake and the western boundary was established 15 miles west of the westen edge of Yellowstone Lake. That is just one example of the arbritrary nature of political boundaries. These original boundaries have been modified slightly, but, with all due respect, that is a hell of a way to manage an ecosystem.

Outlining the boundary of any ecosystem can be difficult. In the broadest sense, everything around us plays a part in our lives and it is appropriate to think of the entire planet (ecoshpere) as our environment and ecosystem. This serves to place human beings' position on this planet into proper perspective, but it does not provide us with a politically manageable entity. The area of immediate concern must be reduced to something with tangible boundaries, clearly defined elements and, for our phychological benefit, it must be discrete enough to enable us to think that we can significantly affect its intrinsic ecological interrelationships.

Ecologists have tackled this problem by dividing the ecoshpere into smaller components. For example, all living things appear as species, all species exist as populations, and all populations of closely interacting species constitute a community. The community interacting with the nonliving components in its environment constitute the ecosystem. This approach provides a conceptual definition of an ecosystem, but, problems still exist when the idea is transported from our minds to a geographical location. Where on earth should these boundaries be placed? And where are the components of neighboring ecosystems sufficiently dissimilar to form an ecotone (ecosys[illegible] boundary)?

For example, many birds that summer in the Greater Yellowstone Region depend upon the southern states and perhaps even Central and South America to provide them with their winter habitat. Clearly, the summer and winter habitats of migratory birds are extremely dissimilar and widely seperated and yet the species require both to survive.

Terrestrial and aquatic habitats and the plants and animals that depend upon them may be adversely affected by acid rain originating far outside the region. Should distant industrial sites and remote winter ranges be considered in the Greater Yellowstone Ecosystem management plan? Ecologically, the answer should be yes, but from a practical and political standpoint, they may have to be ignored- for the moment.

To come to grips with this problem, we must remember that the ecosphere consists of all living and nonliving components interacting with one another. The key concept involves the number and types of interactions. Biologists and ecologists consider genetic exchange within a population and between adjacent populations of a species to be one of the most important interactions in nature. Genetic variability, which is potentially greatest within large gene pools (large populations), enables a species to adapt to changes in the living and nonliving components of its environment and generally avoid the problems of inbreeding.

As important as maintianing genetic variability is to the long-term survival of all species, it deals with only part of the goal of ecosystem management. Another part of that goal is the need to maintain all the interactions, or more specifically all the forms of competition inherent in species sharing the same ecosystem. It is this competition which has determined the evolutionary direction of every species alive today and every species which has ever lived. It is competition which has made each species fit and healthy and it is this same competition working in conjunction with large gene pools which will keep the future generations fit and healthy.

For example, just maintaining the world's largest elk herd in the Greater Yellowstone Ecosystem is not enough; the long-term survival of the elk as a wild species can only be insured by maintianing the type and degree of competition historically present between the elk and all the other conspecifics of the region: the elk and the grizzly bear, the elk and the mule deer, the elk and the mountain lion, the elk and the wolf and so on.

It is this type of competition which has shaped all of these species into what we have today, into survivors. And it is this type of competition which will insure that it is the fittest which continue to survive. We as managers have not yet developed management techniques capable of replacing natural competition to the degree with which it occurs in complex ecosystems and certainly not to the degree that it occurs in the Greater Yellowstone Ecosystem. Simply stated, when it comes to complex ecosystems and the accompanying competition, we have not yet been able to duplicate the results of mother nature.

Perhaps one of the reasons we have not yet been able to improve on the Greater Yellowstone Ecosystem is because of the complex nature of the area. It sits astride the Northern Rocky Mountains on the very backbone of our Nation and reaches from 5000 to over 13,000 feet in elevation. It has habitats where temperatures range from 60 degrees below zero to 200 degrees above zero. It has major geologic features scores of millions of years old and others only a few thousand years old. Most of the surface of Yellowstone National Park was formed by volcanic action two million years ago and then reshaped by more recent glaciation. Much of the Teton Wilderness and the Absaroka Range are covered by material from this and earlier volcanic activity.

The Teton Range is an uplifted, fault block mountain range of relatively recent origin (less than 10 million years old). The gneiss and schist which form the mountains are approximately 2.5 billion years old and very resistant to erosion. This, coupled with the the short time they have been exposed to erosion and sculpturing by glaciers accounts for their beautifully rugged features.

The most recent major geologic influences occurred immediately east of the Teton Range (Jackson Hole) where glaciers swept south out of the Yellowstone highlands as little as 15 thousand years ago. These glaciers deposited layer upon layer of finely ground mineral material throughout the valleys and left moraines and lakes as they retreated, consequently, the soils of much of this region are young and poorly developed. And this is reflected in the sparse biotic communities which occupy these sites.

The origin of the Wind River Range is similiar to that of the Tetons, but much older (perhaps 50 million years old). The Gros Ventre Range, Grayback Ridge, and the Snake River Range are all of sedimentary origin. The Gro Ventres have been uplifted and moderately folded, while Grayback Ridge and the Snake River Range have undergone extensive folding and thrusting, forming the Overthrust Belt much of which is being developed for its rich oil and gas reserves.

These and many other physical features have influenced the plant and animal communities as well as the mineral wealth and subsequent human and industrial development of the Greater Yellowstone Ecosystem.

Pehraps one of the most unique physical features of the Greater Yellowstone Region is the fact that within it rise the headwaters of three of our Nation's greatest river systems. The Yellowstone-Missiouri-Mississippi, the Snake-Columbia and the Green-Colorado This region literally sits at the headwaters of our continent, it is the source of some of the most utilized water in this nation. Situated as it is at the headwaters of these three major river systems, it is not surprising that at least seven floras of quite distinct compositions and histories coalesce in the Greater Yellowstone Region. It is the place where significant members of the Southern Rocky Mountain flora, Pacific Northwest flora, Great Basin flora, Norhtern Rocky Mountain flora all meet with the Boreal North American and Arctic-Alpine floras.

The combination of diverse plant communities, rugged topography, high altitude, and remote location has enabled the Greater Yellowstone Ecosystem to achieve and maintain a diverse and relatively intact fauna. Some to the species key to the region include the bald eagle, osprey, peregrine falcon, great gray owl, whooping crane, tumpteter swan, grizzly bear, black-footed ferret, bison, bighorn sheep, moose, fisher, wolverine, river otter, pine marten, lynx, and mountain lion.

Few if any of these species were historically unique to the Greater Yellowstone Ecosystem, but they now exist only in this area (black-footed ferret) or occur nowhere else in the continental United States in greater concentrations (elk, bison, bighorn sheep, moose, whooping cranes (summer populations) and trumpeter swans). Some indigenous species, notably the wolf, have been eliminated, but the potential for restorations of these species exists so long as the ecological integrity of the region is maintained.

Unfortunately, wildlife populations do not recognize the bold political boundaries described by the 25-plus political units that overlap the Greater Yellowstone Ecosystem. Many species, particularly ungulates, require areas within several political jurisdictions and often far removed from one another to complete their life cycle. Consequently, the ecosystem boundaries seldom follow the political boundaries, instead they are constantly being redefined by the varying requirements of the diverse wildlife populations.

Because our knowledge of the ecological requirements of many of the species present in the Greater Yellowstone Ecosystem is incomplete, the boundaries for the ecosystem must remain vague. The most important point to remember is that an ecosystem must contain all the elements required to perpetuate all species indigenous to the area. Our research efforts should be directed toward identifying these requirements. Only by having this information can we clearly identify the boundaries of the Greater Yellowstone Ecosystem. In the interim, if we err, we must err in favor of the resource by concerning ourselves with too large rather than to small an area.

I have traveled in 5 continents and I have seen the problems stemming from species oriented management and I have seen the problems of resource management based on reactions to problems. It is the hard way to manage a resource. It is often less than successful and it usually costs many times more than it would have if management could have occurred before the problems arose.

We have here in the Greater Yellowstone Region an opportunity to get ahead of the problem, to initiate an innovative approach to resource management. We have the opportunity to manage resources on an ecosystem basis. If we do so then we well be taking a giant step toward a bright future for us and the resources of the Greater Yellowstone Ecosystem. To do so will not be to take anything away from our nation, to the contrary, it will quarantee that one of the most unique areas in all the world will remain far into the future.

TESTIMONY BEFORE HOUSE SUBCOMMITTEE ON PUBLIC LANDS

CONGRESSMAN JOHN SEIBERLING, CHAIRMAN

OCTOBER 24, 1985

PROPOSED GREATER YELLOWSTONE ECOSYSTEM

MY NAME IS HARRY ROBERTS. I AM THE EXECUTIVE DIRECTOR OF THE WYOMING HERITAGE FOUNDATION AND THE WYOMING HERITAGE SOCIETY BASED IN CODY, WYOMING. THE WYOMING HERITAGE ORGANIZATIONS ARE PUBLIC INTEREST ORGANIZATIONS DESIGNED TO BRING INFORMATION TO THE WYOMING PUBLIC ON ISSUES THAT EFFECT THE STATE AND ITS PEOPLE. THE WYOMING HERITAGE SOCIETY IS A MEMBERSHIP ORGANIZATION WITH APPROXIMATELY 1200 MEMBERS. IT IS MANAGED BY A STEERING COMMITTEE OF 36 WHO REPRESENT A BROAD CROSS SECTION OF WYOMING BUSINESS AND JOBS. THE WYOMING HERITAGE FOUNDATION PUBLISHES INFORMATIVE WHITE PAPERS, CONDUCTS PUBLIC FORUMS AND SCIENTIFIC PUBLIC OPINION POLLS. THEY ARE BOTH NON-POLITICAL ORGANIZATIONS DEDICATED TO WYOMING'S HERITAGE WHICH WE BELIEVE INCLUDES NOT ONLY WYOMING'S GREAT NATURAL BEAUTY BUT IN ADDITION OUR NATURAL RESOURCES, WATER, MINERALS, TIMBER AND GRASS FOR LIVESTOCK.

WYOMING IS ONE OF TWELVE MAJOR PUBLIC LAND STATES WHERE 92% OF THIS NATION'S PUBLIC LANDS ARE LOCATED, SOME 729 MILLION ACRES. FORTY-EIGHT PERCENT OF WYOMING'S SURFACE IS OWNED BY THE FEDERAL GOVERNMENT YET THAT 48% OF WYOMING'S SURFACE IS RESPONSIBLE FOR MORE THAN 60% OF WYOMING'S CRUDE OIL PRODUCTION. 80% OF WYOMING'S RANCHES HAVE LEASES ON PUBLIC LANDS. APPROXIMATELY 90% OF WYOMING'S TIMBER IS CUT ON PUBLIC LANDS AND AN ESTIMATED 95% OF THE TOURISTS THAT COME TO WYOMING COME TO VISIT EITHER GRAND TETON NATIONAL PARK OR YELLOWSTONE NATIONAL PARK. THE BACK BONE OF WYOMING'S ECONOMY DEPENDS UPON THE MULTIPLE USE OF OUR PUBLIC LANDS, WHETHER WE'RE TALKING ABOUT AGRICULTURE, MINERAL RESOURCES, OR TOURISM. IT IS WELL SAID IN OUR STATE THAT WHERE YELLOWSTONE PARK GOES

SO GOES TOURISM. AGRICULTURE, WHICH IS OUR NUMBER THREE INDUSTRY IS LITERALLY TOTALLY DEPENDENT UPON BLM LAND AND NATIONAL FOREST LEASES.

WE RECOGNIZE IN WYOMING THAT THE PUBLIC LANDS WITHIN THE BOUNDARIES OF OUR STATE ARE OWNED BY ALL THE PEOPLE IN THIS COUNTRY. HOWEVER, THERE IS A PRIMARY DIFFERENCE IN THAT OUR ECONOMY DEPENDS UPON THOSE PUBLIC LANDS. THIS IS ALSO TRUE IN OTHER MAJOR PUBLIC LAND STATES.

THE CONCEPT OF THE PROPOSED GREATER YELLOWSTONE ECOSYSTEM IS JUST ANOTHER EXAMPLE OF THE CONTINUING ATTACK BY ENVIRONMENTAL GROUPS ON THE MULTIPLE USE AND SUSTAINED YIELD PHILOSOPHY THAT WAS MANDATED BY THE CONGRESS IN 1960. IT IS A POPULAR CONCEPT WITH SINGLE ISSUE GROUPS AND OTHERS THAT HAVE LITTLE OR NO INTEREST IN THE ECONOMY OF THE STATE OF WYOMING.

WITH THIS ISSUE WE WILL AGAIN BE RUNNING INTO THE SAME PROBLEMS THAT WERE PRESENTED TO US IN MR. SEIBERLING'S BILL HR 2379, "THE PARK PROTECTION ACT", WHICH WAS INTRODUCED IN 1983.

IT IS IMPORTANT TO REMEMBER THAT THE CONGRESS HAS ALREADY SPOKEN ON BUFFER ZONES IN THE WYOMING WILDERNESS ACT. YELLOWSTONE PARK WHICH CONTAINS AN ACREAGE OF 2.2 MILLION ACRES IS SURROUNDED BY WILDERNESS AREAS. THE PROPOSED GREATER YELLOWSTONE ECOSYSTEM, WHICH IS ESTIMATED TO CONTAIN AS MANY AS 8.5 MILLION ACRES OF LAND, WILL NOT ONLY ENCOMPASS THOSE SAME WILDERNESS AREAS BUT WILL ALSO PROJECT BEYOND THEIR BOUNDARIES INTO NON-WILDERNESS. WHEN PUBLIC LAW 95-550 WAS PASSED IN 1983, SECTION 504, APPROVED BY BOTH HOUSES OF CONGRESS, STATED THAT "THE CONGRESS DOES NOT INTEND THAT THE DESIGNATION OF WILDERNESS AREAS IN THE STATE OF WYOMING WILL LEAD TO THE CREATION OF PROTECTIVE PERIMETERS OR BUFFER ZONES AROUND EACH WILDERNESS AREA." THIS IS EXACTLY WHAT THE PROPOSED GREATER YELLOWSTONE ECOSYSTEM WILL DO. WHETHER THE CREATION OF

PROTECTION PERIMETERS OR BUFFER ZONES IS DONE ADMINISTRATIVELY OR BY AN ACT OF CONGRESS, IT IS CONTRARY TO SECTION 504. AS THE PUBLIC OPINION POLLS CONDUCTED FOR OUR ORGANIZATION EACH YEAR HAVE CONSISTENTLY INDICATED, THE MAJORITY OF WYOMING PEOPLE BELIEVE THAT WE ALREADY HAVE SUFFICIENT WILDERNESS AND OPPOSE ANY ADDITIONS.

IN THIS YEAR 1985 IT MAKES LITTLE SENSE TO TRY AND RECREATE A NATURAL HABITAT FOR WILDLIFE GREATER THAN THE SIZE OF MASSACHUSETTS AND CONNECTICUT. IF SUCH A PROPOSAL IS SUCCESSFUL IT WOULD NOT BE TOO MANY YEARS BEFORE WE SEE THE NEXT STEP WHICH WOULD INVOLVE A SUBSTANTIAL REDUCTION IN HUNTING, PLUS SUBSTANTIAL REDUCTIONS AND ADDITIONAL RESTRICTIONS ON OUTFITTING, BACK PACKING AND PACK TRIPS PLUS THE VIRTUAL ELIMINATION OF GRAZING, TIMBERING AND MINERAL DEVELOPMENT. IN OTHER WORDS, THIS WOULD BE JUST THE BEGINNING, THE TIP OF THE ICEBERG. YELLOWSTONE PARK PRESENTLY HAS AN EXCESSIVE NUMBER OF BUFFALO, MANY OF WHOM HAVE BRUCELLOSIS, A DISEASE THAT COULD RAISE HAVOC WITH CATTLE HERDS IN ADJOINING STATES IF ALLOWED TO SPREAD. THE NORTHERN YELLOWSTONE PARK ELK HERD IS ALSO ABOVE TARGET NUMBERS. THERE ARE THOSE WHO FEEL THAT THE REINTRODUCTION OF THE WOLF SHOULD HAVE A VERY HIGH PRIORITY. ONCE THE GREATER YELLOWSTONE ECOSYSTEM IS SET IN PLACE THEN THESE ANIMALS WILL BE GIVEN EVEN MORE HABITAT AND GRASS, AND IN TURN WE WILL SEE LESS MULTIPLE USE AND EVENTUALLY YELLOWSTONE ITSELF WILL EXPAND TO A DE FACTO PARK OF MORE THAN 8 MILLION ACRES.

THERE MAY BE SUCH A THING AS A NATURAL ECOSYSTEM, UNTOUCHED BY MAN, IN ALASKA AND IN NORTHERN CANADA BUT THE EXTENT OF ANY SUCH AREA THAT CURRENTLY EXISTS TODAY IN WYOMING HAS ALREADY BEEN LIMITED, NOT ONLY BY MAN BUT ALSO BY CONGRESSIONAL ACTION. BIOLOGISTS WILL TELL YOU THAT THE AREA WITHIN AND IMMEDIATELY AROUND YELLOWSTONE PARK HAS BOTH CLIMATIC

AND FORAGE LIMITATIONS WHICH LIMIT WINTER AND SUMMER RANGE FOR EXISTING BIG GAME NUMBERS. IT WOULD NEITHER BE EQUITABLE OR FAIR TO EXISTING PROPERTY OWNERS AND OTHERS TO DEMAND THAT SOME FEE LAND AS WELL AS LEASED PUBLIC LANDS IN SOME 30 LEGAL JURISDICTIONS BE MANAGED PRIMARILY FOR WILDLIFE AND RECREATION.

MR. SEIBERLING AND MEMBERS OF THE COMMITTEE, IF 48% OF THE STATE OF OHIO WAS UNDER THE MANAGEMENT OF THE FEDERAL GOVERNMENT THEN THE GOOD PEOPLE IN OHIO WOULD BE LOOKING FOR SOME WAY TO OBTAIN EITHER A MANAGEMENT OR PLANNING RESPONSIBILITY FOR THAT AREA. THAT'S EXACTLY THE WAY WE FEEL IN WYOMING. FEDERAL LEGISLATION THAT RELATES TO PUBLIC LANDS IS SUBJECT TO A "NO COST VOTE" IN THE NON-PUBLIC LAND STATES. AS A RESULT, WYOMING PEOPLE, WYOMING AGRICULTURE, OUTFITTING, MINERALS OR ANY OTHER BUSINESS IN OUR STATE THAT DEPENDS UPON PUBLIC LANDS IS AT THE MERCY OF THE "NO COST VOTE" SYSTEM.

OUR BELIEF IS THAT WYOMING SHOULD HAVE A PLANNING RESPONSIBILITY EQUAL TO THAT OF THE FEDERAL GOVERNMENT ON PUBLIC LANDS WITHIN THE BOUNDARIES OF WYOMING. NOT ONLY SHOULD THE STATE BE INVOLVED IN PLANNING BUT THERE MUST BE AN OVERSIGHT OF THE STATE'S INTERESTS IN USER PROBLEMS ON FEDERAL LANDS. THIS COULD ALL BE CONE BY A COMMISSION ESTABLISHED BY THE STATE LEGISLATURE. THAT PLANNING COMMISSION WOULD BE MADE UP OF NOT ONLY THE USERS BUT WOULD ALSO HAVE REPRESENTATION FROM THE PUBLIC AND STATE AGENCIES. THE COMMISSION WOULD BE CONCERNED NOT ONLY WITH PLANNING ON LANDS UNDER THE JURISDICTION OF THE DEPARTMENT OF AGRICULTURE BUT ALSO ON PARK SERVICE AND BLM LANDS.

RECENTLY THE SHOSHONE NATIONAL FOREST PRINTED ITS PROPOSED "LAND AND RESOURCE MANAGEMENT PLAN" FOR AN AREA 2/3 THE SIZE OF CONNECTICUT AND TOTALLY ENCLOSED WITHIN OUR STATE. THE PLAN AND DRAFT EIS CONTAINED

OVER A 1,000 PAGES AND, EXCEPT FOR COMMENTS FROM WYOMING'S DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE GAME AND FISH DEPARTMENT, WYOMING DIDN'T HAVE A SINGLE PAGE OF OFFICIAL PLANNING INPUT OR PLANNING RESPONSIBILITY FOR THAT ENTIRE AREA.

AT THE PRESENT TIME THE OIL AND GAS BUSINESS IN WYOMING IS AT A STAND STILL. AGRICULTURE HAS REACHED AN ECONOMIC CRISIS. TRAVEL TO YELLOWSTONE PARK REACHED A PEAK IN 1978, A RECORD THAT HASN'T BEEN MATCHED SINCE. THIS IS NOT THE TIME TO JEOPARDIZE EXISTING WYOMING JOBS IN TIMBER, OUTFITTING, GRAZING AND MINERAL DEVELOPMENT IN ORDER TO ESTABLISH A DE FACTO NATIONAL PARK. THE PROPOSED GREATER YELLOWSTONE ECOSYSTEM IS AN UNREALISTIC FANTASY, THAT WILL NOT BE IN WYOMING'S BEST INTERESTS AND COULD HAVE A DRASTIC IMPACT ON OUR ECONOMY. THANK YOU VERY MUCH FOR ALLOWING ME TO APPEAR BEFORE YOU.

TESTIMONY OF BOB ANDERSON

Executive Director
Greater Yellowstone Coalition

Joint Oversight Hearing on the
Greater Yellowstone Ecosystem

Subcommittee on Public Lands
Subcommittee on National Parks and Recreation
House Committee on Interior and Insular Affairs

October 24, 1985

My name is Bob Anderson; I am the executive director of the Greater Yellowstone Coalition, an alliance of 43 conservation groups formed in 1983 to advocate protection of the health of the Greater Yellowstone ecosystem. The Coalition was the response of the conservation community to the problem that is the subject to today's hearing.

Odum (1971) defined an "ecosystem" as living organisms and their non-living environment functioning as a community. Key to this concept of ecosystem are the relationships which bind living organisms and their environment together.

The ecosystem approach to the management of natural resources has been described and advocated for many years (Watt, 1968. Van Dyne, 1969). According to this concept, an ecosystem can be best managed if its function is understood and if decisions take into account the relationships among the system's parts and the sensitivities of the system to human-applied influences.

Greater Yellowstone lends itself well to this approach, primarily because it is an identifiable ecosystem (Reese, 1984. Camenzind, 1984). Though no ecosystem boundary is absolute, the Greater Yellowstone ecosystem can be defined as Yellowstone and Grand Teton national parks and the surrounding forested, mountainous lands. Here, the vegetation forms predictable patterns (Kuchler and Baily, 1973) and many wildlife species migrate throughout the system. Examples are bald eagles, elk, pronghorn, cutthroat trout, and grizzly bears.

Greater Yellowstone exhibits remarkable diversity for a high elevation temperate zone ecosystem. Among the habitat types are sage desert, alpine meadows, bogs, wet meadows, dry meadows, lakes, streams, rivers, lodgepole pine forest, mixed conifer (Douglas fir, subalpine fir, Engelmann spruce) forest, thermal springs, and rocky crags.

The ecosystem has adapted to the rugged physical environment of the region. And it has adapted to the many activities of man. Millions of people visit the area each year. Cattle and sheep graze there. Timber is harvested. Oil and gas exploration is active. Hunting, fishing, and wilderness outfitting are major recreational activities. Fires have been suppressed and predators controlled.

In the face of these use patterns, it is astonishing how well the ecosystem's primitive nature has been preserved. Free-ranging ungulates--bison, moose, elk, mule deer, bighorn, and pronghorn--are abundant. Predators include black and grizzly bears and coyotes; the gray wolf is the only major element of the original fauna which is missing. Although several small towns exist on its borders and major roads cross it, huge expanses of wilderness make up the majority of Greater Yellowstone ecosystem lands.

The Greater Yellowstone ecosystem has national, even international significance. It is the largest, essentially intact ecosystem in the earth's temperate zones (Reese, 1984). Yellowstone became the world's first national park with the stroke of President Grant's pen in 1872. Since, it has been designated a World Biosphere Reserve and a World Heritage Site by the United Nations. But there are many other reasons why the ecosystem is worthy of special attention and management.

One by one, the world's geothermal geyser basins have been destroyed or diminished by man's activities. Greater Yellowstone now stands alone--it contains the the world's last major undeveloped geothermal resource. There is mounting evidence that the sources of water for the geothermal wonders of Yellowstone National Park are catchments on adjacent national forest lands.

Greater Yellowstone is one of two ecosystems in the lower 48 states that supports significant populations of the threatened grizzly bear. But Greater Yellowstone's grizzlies are in danger of extinction, and Yellowstone National Park alone cannot support a healthy population of bears. Even by conservative estimates, 40% of the population's essential habitat lies outside Yellowstone National Park.

Though the ecosystem is famous for grizzly bears and elk, it is also home to vast and varied species of wildlife such as moose, black bear, mountain lions, bison, coyotes, bald eagles, and deer. Non-game species abound in the ecosystem and contribute to its diversity, productivity, health, and appeal. Much of this wildlife is migratory, crossing political boundaries in the course of meeting annually-cyclic life needs.

The landscape of Greater Yellowstone varies from rugged mountain peaks to wide, marshy meadows. Wildflowers abound in the summer months, and some of North America's most beautiful and wild rivers flow through the ecosystem. The Greater Yellowstone ecosystem is a haven for recreationists and sightseers. Over two million people visit Yellowstone National Park each year. In addition, millions of people use the national forests, wildlife refuges, and other parks in the ecosystem for their superb hiking, fishing, hunting, and scenery. Tourism and recreation are important parts of the region's economy, accounting for over 20,000 jobs in Montana alone.

Preserving Greater Yellowstone with an ecosystem approach would have many benefits. The region's wildlife would continue to enrich the lives of millions of hunters, photographers, and observers. Logging and grazing would be practiced on a truly sustained yield basis. Threatened and endangered species such as the bald eagle, the grizzly bear, the whooping crane, and the peregrine falcon would have an anchor for survival. The region's economy would be enhanced through the maintenance of the high quality of the product of the major industry--tourism. Watersheds would continue to provide abundant, clean water for downstream users, including irrigators, municipalities, industry, recreation, fish, and wildlife. And one of the world's most significant treasures would be preserved for future generations.

Unfortunately, Greater Yellowstone is threatened. It has lost the protection of isolation. Benign neglect is no longer an acceptable management strategy. Imminent changes spell trouble for the region.

A year ago, the Greater Yellowstone Coalition published an inventory of the development proposals and management issues facing the Greater Yellowstone ecosystem (Greater Yellowstone Coalition, 1984). (A copy is submitted for the record.)

Threats to Greater Yellowstone 1984 was impressive and depressing by its length. Never before had the scope of the development proposals been comprehended. This year's update will catolog over a hundred mines, roads, timber sales, oil and gas wells, geothermal wells, dams, ski areas, and other projects, as well as several proposals for wild and scenic river and wilderness designation.

Any one of these development proposals could be tolerated, its impacts mitigated. But taken together, even in small numbers, the cumulative effects of the proposed development threatens to irreversibly degrade the Greater Yellowstone ecosystem forever.

The problem is compounded by the confusing array of local, state, and federal agencies with responsibility to manage the land and resources of Greater Yellowstone. Imagine: two national parks, two national wildlife refuges, six national forests (which report to three different regional offices), three states, thirteen counties, the Bureau of Land Management, ...

Many of the agencies, the Forest Service and the National Park Service, for example, are concerned about the ecosystem and are working together on projects such as grizzly bear recovery. However, coordination has been insufficient because the obstructions to full cooperation among nearly 30 agencies are formidable. The agencies have radically different cultures, different histories, different clienteles, different legislative mandates, different problems, different personalities, and different perceptions of ecosystem condition.

Without congressional guidance, it is unlikely that any two agencies will develop the joint goals necessary to assure preservation of the Greater Yellowstone ecosystem. Today, no agency has an employee whose responsibility it is to promote the welfare of the ecosystem and to coordinate management activities with other agencies.

Forest planning is a good example of the inadequacy of the extant institutional arrangement. With the exception of the Bridger-Teton National Forest, all of the national forests in the Greater Yellowstone ecosystem have released Draft Forest Plans as required by the National Forest Management Act of 1976.

These plans chart the 50-year management direction for forest resources. Many of these resources, such as migratory wildlife, rivers, airsheds, and scenery, cannot be managed within the political boundaries of a single agency--they are affected by the plans and management decisions of many different agencies. Yet, the plans released by Greater Yellowstone's national forests have consistently failed to address the concept of integrated management of the ecosystem's forest, park, BLM, state, and private lands. The only mention of the ecosystem in the plans is in discussions of the threatened grizzly bear. Not surprisingly, this responsiveness is a result of Congressional action, the Endangered Species Act.

The lack of integrated management results in many inconsistencies in the plans and makes ecosystem-wide analysis of forest plan proposals impossible. The Draft Shoshone National Forest Plan recommends all critical grizzly bear habitat on the Forest be withdrawn from oil and gas development. We strongly applaud that policy. However, contiguous forests, the Gallatin and the Custer, made no such recommendation in their draft plans. The forest plans set management direction in a manner that is oblivious to factors outside of forest jurisdictions. No attempt to assess the cumulative or off-forest affects of management practices is made in any of the plans.

The parochialism of ecosystem managers was brought into sharp focus for me recently. I asked a Forest Service manager how grizzly bears and his plans for a timber sale in grizzly habitat would be affected by another timber sale less than 10 miles away--but on a different national forest. He hadn't heard of the other sale even though it is also in occupied grizzly bear habitat and will directly affect the same bears he is charged with protecting. This lack of coordination among ecosystem managers is common.

The economic data in the forest plans are incomplete, fragmented, and inconsistent, making a detailed economic analysis impossible. However, information available in the plans supports a conclusion that the economic importance of ecosystem's amenity resources far outweighs that of the timber program. For example, the Draft Gallatin National Forest Plan shows the forest provides six times as much income to the local economy from recreation as it does from its timber program. An addendum to this testimony summarizes economic information on timber and recreation on the ecosystem's forests. The information in this addendum supports our conclusion, but demonstrates how data in the five forest plans are not comparable.

There are sites in the Greater Yellowstone ecosystem where revenues from timber harvest exceed costs and where environmental impacts can be mitigated and tolerated. However, many of the timber sales in the ecosystem lose money for the Forest Service and the taxpayers of the nation. Subsidizing the timber harvest benefits a few people in the short run. However, the roads that accompany timber harvest jeopardize the livelihoods of far more people--those who depend on the ecosystem's wildlife, clean water, fisheries, and unspoiled scenery, all of which would be adversely affected by many of these timber sales.

The Wyoming Futures Project (SRI, 1985), funded by the state of Wyoming and private sources, and the Madison River Thermal Study (Big Sky Country Areawide Planning Organization, 1983), are among the studies that have shown the importance of the amenity resources to the ecosystem's economy, both in the present and in the future.

If the ecosystem's forest plans are implemented in their present form, the Greater Yellowstone ecosystem will continue to be managed in a piecemeal fashion. Wildlife, scenery, recreation, and water quality will be damaged at the expense of a money-losing timber program. Little coordination among agencies and managers will occur and projects with the potential to degrade the amenity values in the ecosystem will continue to be approved without an adequate effort to estimate their cumulative effects.

Some would advocate either that there is no serious problem facing Greater Yellowstone or that the existing administrative structure can accomplish an adequate level of protection for the area.

Indeed, there are examples of constructive agency cooperation. One is the Interagency Grizzly Bear Committee. One of the IGBC's promising endeavors is an analytical model for the prediction of the cumulative effects of various activities on the grizzly bear population. Unfortunately, the model is now in the development stage and its efficacy is not known. Furthermore, the cumulative effects model stops short of what is really needed--a cumulative effects analysis for the ecosystem as a whole.

The cumulative effects model for grizzly bears has its roots and its implementation potential in the Endangered Species Act. Without Congressional action, such a model for the ecosystem as a whole would have no such foundation in law. Its mandate and the agencies' accountability to it would be lacking. Therefore, a fundamental change in the legislative framework in necessary.

Others fear that the conservationists, abetted by forces from outside the northern Rockies region, are advocating a management system so restrictive that traditional uses of the national parks and national forests will be banned. That extreme approach is not necessary. What is needed, at a minimum, is change in priorities for some of the agencies. In a category of high priorities should be the health of the ecosystem, wildlife, environmental quality, scenery, and recreation. A second category of activities, including road-building, logging, and drilling, would have lower priority. These activities would be done in such a way that the primary values would not be seriously degraded.

Some things are simply worth saving forever. The Greater Yellowstone ecosystem is one of them. Unless the ecosystem and its problems are addressed by Congress, Greater Yellowstone faces an irreversible decline. We recommend that Congress begin the process of finding a suitable solution to this problem, a solution which protects the health of the Greater Yellowstone ecosystem while accommodating regional interests compatible with the good health of the ecosystem.

First, recognize the potential seriousness of the Greater Yellowstone problem and conduct an independent inquiry. That inquiry should, in addition to characterizing the seriousness of the problem, explore alternative approaches to solving it.

Second, more information is needed about Greater Yellowstone. A sound, defensible, scientific definition of the ecosystem must be developed by a respected institution such as the National Academy of Sciences. First-rate science is needed to define the ecosystem so that managers can recognize the critical parameters which must be addressed if the ecosystem is to be preserved. The definition must be constructive, fair, and impartial so it can become the foundation for planning at federal, state, and local levels.

Third, Congress should ask the federal agencies involved in the management of the Greater Yellowstone ecosystem to review their planning and decision-making actions. To what extent do they conform to an ecosystem approach? What improvements can be made under the current institutional framework?

Fourth, Congress should begin the process of developing legislation that would: direct the federal agencies to have as their top priority the management of Greater Yellowstone in such a way that its good health will be maintained forever; and establish a system of integrated management which would provide for the accountability of the agencies involved.

In summary, Greater Yellowstone is an ecosystem of national significance. It is threatened by a vast array of development proposals, the cumulative effects of which would irreversibly degrade the ecosystem. And the management framework in place in the region is not adequate for the task of adequately controlling this development and preserving the ecosystem's primary values forever. In the face of impending change, forceful action is needed by Congress if the health of the Greater Yellowstone ecosystem is to be maintained.

Thank you for the opportunity to present these views.

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ATTACHMENT A

ADDENDUM

Comparative Data on the Economic Importance of Timber and Recreation in Greater Yellowstone Ecosystem Draft Forest Plans

Beaverhead National Forest

The Forest provided 91 direct and 276 total timber related jobs in 1980. These jobs provided $2,422,000 direct and $5,972,000 total income to the local economy (DEIS, p. B-66)

The Forest provided 241 direct and 386 total recreation related jobs in 1980. These jobs provided $2,822,000 direct and $4,864,000 total income to the local economy (DEIS, p. B-66).

Bridger-Teton National Forest

The Bridger-Teton draft plan is scheduled for release in January, 1986.

Custer National Forest

The Forest provided 6.9 direct and 24.5 total timber related jobs in 1980. These jobs provided $148,000 direct and $325,000 total income to the local economy (DEIS Appendices, p. B-85).

The Forest provided 294.5 direct and 857.7 total recreation related jobs in 1980. These jobs provided $4,531,000 direct and $13,215,000 total income to the local economy (DEIS Appendices, p. B-85)

Gallatin National Forest

The Forest provided 65 direct and 189 total timber related jobs in 1980. These jobs provided $1,681,000 direct and $4,209,000 total income to the local economy (DEIS, p. B-46).

The Forest provided 1,171 direct and 1,992 total recreation related jobs in 1980. These jobs provided $10,254,000 direct and $25,405,000 total income to the local economy (DEIS, p B-46).

Shoshone National Forest

Timber accounts for 54 direct jobs (DEIS, p. B-113).

Outfitting accounts for over 500 seasonal jobs (Review of the Draft Shoshone Forest Plan and EIS, CHEC, p. 16).

Targhee National Forest

Timber accounted for 599 direct jobs and $4,212,000 in direct income to the local economy in 1979 (DEIS, p. 81).

A study found visitors spent $33.81/person/day in the winter and $16.30/person/day in summer. There were 1,807,900 recreation visitor days in 1980 (DEIS, p. 53). The plan offers no way of determining how many were winter use and how many were summer use. However, even assuming all were summer use, the income generated from recreation in 1980 would be $18,269,000, or over 4 times the amount generated by timber harvest.

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THE WILDERNESS SOCIETY

STATEMENT OF WILLIAM A. TURNAGE, PRESIDENT, THE WILDERNESS SOCIETY, AT THE OVERSIGHT HEARING ON THE GREATER YELLOWSTONE ECOSYSTEM, BEFORE THE HOUSE SUBCOMMITTEES ON PUBLIC LANDS, AND NATIONAL PARKS AND RECREATION, COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, OCTOBER 24, 1985.

Chairman Seiberling, Chairman Vento and members of the Subcommittees, I am William Turnage, President of The Wilderness Society, a non-profit conservation organization with 145,000 members throughout the country. The Wilderness Society is dedicated exclusively to the proper stewardship of our public lands and has a particularly strong interest in the preservation of wild land values for the benefit of present and future generations.

Chairman Seiberling and Chairman Vento, we commend you for your leadership in convening this oversight hearing. We believe that today's testimony will show that there is critically important work that must be done to properly assess the situation in the Greater Yellowstone ecosystem and to formulate workable

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solutions. We believe further that these two subcommittees will have to play a key role if our nation is to be well-served in this noble cause.

UNIQUENESS OF YELLOWSTONE

In the mid-nineteenth century, reports from Yellowstone's early explorers simply were not believed. Newspapers refused to print what they considered fictitious articles or edited them heavily to eliminate "exaggerated lies."

It was not until about 1870 that the public finally began to take seriously the accounts of Yellowstone's wonders. The Congress saw the merits of more exploration and appropriated money for the 20-man Hayden Expedition in 1871. This intrepid group brought back convincing evidence--including photographs--that Yellowstone was a truly extraordinary place. The next year, after examining this evidence, Congress took a daring and unprecedented step: it carved out a piece of Yellowstone as the world's first national park.

The wisdom of that act of Congress has been clear to many millions of Americans, and to people around the world. "Grand, glorious, and magnificent was the scene as we looked upon it from Washburn's summit," wrote one early diarist, General W. E. Strong. "No pen can write it--no language describe it." Majestic mountains are visible in all directions, ranging up to 10,243 feet above sea level at Mount Washburn. The region contains an estimated 10,000 thermal features, including steaming pools, bubbling mud pots, and more geysers than the rest of the world combined. The most prominent of these, of course, is Old Faithful. Inhabitating Greater Yellowstone is a remarkable variety of wildlife and plants.

THE COMPONENTS OF THE ECOSYSTEM

The best known areas in the Greater Yellowstone Ecosystem are the two national parks: Yellowstone and Grand Teton. They add up to 2.5 million acres. But as Tom Reid, the Washington Post's Rocky Mountain correspondent wrote in that paper's Outlook section on June 23, "the Yellowstone region is greater than the sum of its parks."

Specifically, the ten million acres or more that are in the Greater Yellowstone ecosystem are made up of the two national parks, two national wildlife refuges, parts of six national forests, a portion of an Indian reservation, various Bureau of Land Management areas, and parcels that are owned by state and local governments and private parties. The ecosystem takes in parts of three states: Wyoming, Idaho and Montana.

THREATS TO THE GREATER YELLOWSTONE ECOSYSTEM

Every day it becomes clearer that this natural treasure faces an uncertain future. The Greater Yellowstone Coalition, which in its two years has done so much to shed light on the problems in the region, has published a frighteningly thick book listing the threats to the ecosystem. Among the most serious are:

Mining. Under the Mining Law of 1872, anyone can file an unpatented claim on national forest land. The result has been predictable: in the Washakie and North Absaroka Wilderness Areas alone, for example, the Forest Service has estimated that there are more than 2,300 claims. Companies with an interest in the ecosystem want platinum, chromium and other minerals. Mining operations bring roads, drills, heavy equipment, and erosion. The damage to habitat for grizzlies, elk, deer and other wildlife is considerable. Because of depressed mineral prices, activity now is reduced. When the market strengthens, activity will increase rapidly.

Oil and gas development. More than 50 percent of the land in the six national forests is leased for oil and gas development. The best known example of oil industry determination to have its way in the Greater Yellowstone ecosystem is Texaco's effort in the spectacular Gros Ventre Wilderness near Jackson, Wyoming. Recently the company appealed a federal judge's ruling that blocked drilling that BLM had approved in 1982. Texaco says that it is "prepared to deal with" intense local opposition to its plans. No one knows all the effects of oil and gas development, but it is clear that habitat for many wildlife species is damaged.

Geothermal development. For the moment, there are restrictions on geothermal development of federal lands in the ecosystem. But development on non-federal tracts is not restricted. The interdependence of the features in a hydrothermal system is clear. On this continent, Nevada's Beowawe Geysers were second only to Yellowstone's. Exploration that began there in 1945 led to development that destroyed the system by 1961. Shortly thereafter, the geysers of Steamboat Springs in Nevada suffered a similar fate. The folly of such development is a lesson that has been taught again and again around the world, but apparently, it is a lesson we have yet to learn.

Timbering. Timber harvesting, and the accompanying roadbuilding, damage watersheds, dirty streams, harm wildlife habitat, and reduce recreational opportunities. They pose extremely serious threats to the grizzly. Yet the Forest Service is pushing for more roads and more timber harvesting, much of it in the most sensitive areas of the eccsystem. I will discuss this problem in more detail later in my testimony.

These are only some of the threats. Additional threats documented by the Greater Yellowstone Coalition include dams, overgrazing by sheep and other domestic animals, second home construction and poaching.

The ecosystem could survive any of these individually. But collectively, these problems would prove too damaging. One of the problems of the fragmented management authority is that there is insufficient coordination to make sure that the cumulative impact does not exceed what the ecosystem can endure.

THE NEED FOR ECOSYSTEM PROTECTION

Those who have studied the problems see only one way to save Yellowstone: we must better protect the entire ecosystem. The area is a fragile ecological web. A serious reduction in one species population, for example, can easily push the system out of equilibrium. Overpopulations of other species are a common result, creating imbalances that endanger still more plants and animals. The essentially straight-line boundaries of the park, established by the distant Congress more than a century ago, look fine on a map. But they bear little relation to ecological reality. Grizzlies, elk, cut-throat trout and trumpeter swans cannot read government boundary signs!

Robert Barbee, Superintendent of Yellowstone National Park, put it this way last August in critical comments filed in response to the plan for the Gallatin National Forest:

> The park itself, so long seen as a "crown jewel" of wild nature, was for many years viewed with no reference to its nonpark setting. Now, because of extensive scientific research involving many elements of the natural setting, we have overcome the old stereotype of the park being surrounded by lands that

> were somehow less "important." From an ecological perspective, the entire ecosystem has scientific and cultural values that can be demeaned by management actions in any part.

The role that the Greater Yellowstone ecosystem has played is illustrated by the bison. Man drove this creature to the brink of extinction, primarily through mass slaughter on the Great Plains. By the early 1900s there was only one free-roaming herd left in this country--and it was in Yellowstone. Noted ecologist William H. Romme writes about such special contributions of the Greater Yellowstone ecosystem and the importance of keeping it whole in a chapter of the soon-to-be-published Conserving Biological Diversity In Our National Forests:

> Many of the species in the Yellowstone ecosystem were once common or widespread in what is now the United States, but have disappeared over most of their former ranges through loss of habitat and direct human-caused mortality. Yellowstone has become an isolated refuge for formerly wide ranging species like the river otter and the grizzly bear. They persist here because they are protected, they are relatively free of human disturbance, and the ecological communities of which they are part remain largely complete and functional. The latter condition may be the most important of all. The grizzly, for example, depends on a variety of

> habitats and food sources, including the carcasses of large animals that perish in the winter. If a single strand of the complex food web leading to the grizzly is interrupted, or a portion of its habitat made unsuitable or unavailable, the bear itself may be threatened...

The ecosystem is now one of the grizzly's last strongholds. In June Park Service Director William Penn Mott said: "The saving of the grizzly must be elevated to the level of a national campaign! It is a campaign we must win! Or we may not be able to save ourselves."

FRAGMENTATION OF AUTHORITY IN ECOSYSTEM

The effort to preserve this ecosystem is complicated by the fragmentation of authority. The National Park Service oversees the two national parks. The U.S. Fish and Wildlife Service is responsible for the National Elk Refuge and Red Rock Lakes National Wildlife Refuge. Wind River Indian Reservation is administered by the tribal government and the Bureau of Indian Affairs. Other parcels are the responsibility of the Bureau of Land Management. The six national forests in the ecosystem, which report to three different regional offices, are under the authority of the U.S. Forest Service, which is part of the U.S. Department of Agriculture. Three state governments and numerous local governments own other parcels, while some land is privately owned. Even those who own no acreage, like state fish and game departments, have management authority in certain areas. The Greater Yellowstone Coalition has counted almost 30 entities exercising authority in the area.

The Federal Government holds the key to coordinated, ecosytem-based management of this land. Acting for 239 million Americans, it is the steward of the vast majority of the Greater Yellowstone ecosystem. If the Federal Government were to commit itself to policies that would protect the ecosystem, there would at least be a chance for success.

THE SERIOUS FAILINGS OF THE FOREST PLANS

Unfortunately, the Government has failed to make this commitment. Max Peterson, the chief of the Forest Service, said this summer that an ecosystem approach is "a grandiose solution to a simple problem." But the long-term management plans being issued by the Service for each of the ecosystem's six national forests--which together form the largest block of land in Greater Yellowstone--clearly show that rather than being part of the solution, the Forest Service is a very large part of the problem. Though we hear vague agency assertions that the plans' drafters are coordinating their efforts, with the ecosystem's needs in mind, the individual plans send a vastly different message.

In the Gallatin National Forest, on the north side of the ecosystem, 19.3 million board feet (mmbf) of timber were harvested in an average year from 1979 to 1984. The Forest

Service has proposed a 40 percent increase in the annual cut over the next 50 years. The road mileage in the Gallatin would increase by 147 percent to nearly 2,000 miles.

The plan for the Custer National Forest, located in the northeast corner of Greater Yellowstone, calls for increasing the cut by 135 percent. Roads, for both loggers and oil and gas drillers, eventually would total 5000 miles. This ambitious development would reduce even further the winter range that the area's elk and bighorn sheep must have.

On the park's eastern flank, in the Shoshone National Forest, the Forest Service is calling for a 13 percent harvest increase. More than half the volume would come from the Wind River Ranger District, close by important wilderness areas and critical elk habitat.

In the Beaverhead National Forest, on the northwestern edge of the ecosystem, the Forest Service has proposed increasing the cut by 64 percent and adding 2,925 miles of timber roads to the 1,685 that exist already--a 174 percent increase. Three-quarters of the Beaverhead will be opened to oil and gas leasing.

The plan for the Targhee National Forest, located in the southwest corner of the ecosystem, proposes a reduction in the annual cut from 75.2 mmbf to 57 mmbf by the end of the fifth decade but calls for an annual cut of 86 mmbf during the first decade. Road mileage would increase by 60 percent. The Forest Service also calls for an unwise relaxation of clear-cutting standards, allowing huge 100-acre blocks to be harvested. The hard-to-regenerate Douglas fir stands are targeted for significant harvest increases. The areas of the Targhee most attractive to grizzlies are slated for major timbering and oil and gas development.

The plan for the largest forest in the ecosystem, the Bridger-Teton, is due out soon. It reportedly proposes increasing the annual harvest by 50 percent. Taken together, these plans draw a portrait of an agency that is totally failing to provide the stewardship of public lands that is its duty under the law. If the Forest Service follows through with its proposed roadbuilding scheme, for example, the six national forests in the ecosystem will be laced with more than 18,000 miles of road. That is the equivalent of 40 percent of the mileage in the entire U.S. interstate highway system! Areas that would be magnificent additions to the National Wilderness Preservation System will become roaded and thus lose eligibility for wilderness designation.

The roads pose a particular hazard for the embattled grizzly. Experts estimate that the number of grizzlies in the Greater Yellowstone ecosystem has declined 30 percent over the past ten years. More ominously, the number of adult females is now believed to have dropped to just 36. That makes it very hard to sustain a population. Roads mean more contact between humans and grizzlies. The result is the shooting, for various reasons, of more bears. Others are forced into the increasingly limited areas where the grizzly can avoid man.

The Forest Service's insensitivity to the land and the wildlife is appalling enough. To make matters worse, timber harvests are being increased even though every single one of these forests has been losing taxpayers' dollars on its timber program. As testimony in June before Chairman Seiberling's and Chairman James Weaver's subcommittees indicated, below-cost timber sales are a nationwide problem. They are particularly prevalent in the Rockies. Forest Service data for the Fiscal Years 1979 to 1984 show the following losses for every dollar invested by the Service in its Greater Yellowstone forests:

Beaverhead	68 cents
Custer	91 cents
Gallatin	69 cents
Shoshone	66 cents
Targhee	46 cents
Bridger-Teton	29 cents

The Forest Service has offered specious arguments that there are non-timber benefits from all this logging. The agency, however, has failed to prove the point. The time has come for the Forest Service to phase out sales of below-cost timber.

The bottom line today is this: the U.S. taxpayer is paying money to have what is arguably the most extraordinary ecosystem in this country damaged, increment by increment, and eventually irretrievably. If the Forest Service is allowed to proceed with its irresponsible uneconomic timber plans for the Greater Yellowstone, the losses to the U.S. Treasury will grow even larger. They will grow larger not only because there will be more timber sales but because the agency will be offering timber stands in increasingly remote and mountainous areas, thus raising the Forest Service's roadbuilding costs, the most expensive part of the timber program. This simply cannot be allowed to go on and on.

Congress must bring the Forest Service face-to-face with reality. The agency remains gripped by a timber-cutting obsession acquired during the post-World War II housing boom. This country's needs are different today. Visits to our national forests' roadless areas, for example, have increased fifteenfold over the past 40 years. No one who has studied the issue sees anything but further growth in the demand for outdoor recreation. These citizens are not going to their national forests to see clear-cut mountainsides or to fish in streams that are so damaged by erosion that fish cannot survive. But if the Forest Service does not change its course, that is what many visitors will find. Fifty more years of clear-cutting will just about finish the "forest" aspect of some of our most beloved and biologically valuable forests.

THE ECONOMIC PROMISE OF RECREATION

The clear message from the studies of recent years is that recreation and tourism are the most promising industries for the Rocky Mountain region. A report by the State of Colorado concluded that recreation accounts for 75 percent of the national forests' benefits to that state's economy, compared to seven percent for timbering. Every year there are more people going into business as outfitters and guides or meeting other needs of visitors.

Just last week a major study by SRI International, commissioned by the State of Wyoming with the financial help of certain corporations and foundations, revealed that tourism was the only industry in Wyoming with the potential for growth. The mining and oil and gas industries, at best, will remain flat through the rest of the century. More likely, their fortunes will decline. The report stated:

> Travel, recreation, and tourism is one economic sector "right" for Wyoming--clean, consistent with most values, and growing nationally. It builds on Wyoming's comparative advantage of natural beauty, wildlife, and remoteness. That thousands of people come to visit Wyoming is a strong compliment to the state. This sector, by all measures, is an appropriate one for Wyoming's leaders to develop.

The greatest economic mistake that the region could make would be to prop up those declining industries with sweetheart deals and incentives, and in the process destroy the natural assets that guarantee the region's future prosperity. The Greater Yellowstone, if properly preserved, could become this nation's Recreation Capital!

These economic realities need to be discussed extensively, but other witnesses here today will be concentrating on them, so I will not go into any further detail.

WHAT NEEDS TO BE DONE

The Greater Yellowstone Ecosystem has reached a critical point. It is now clear that business-as-usual will ruin what our ancestors had the good sense to protect. If the Forest Service is permitted to step up development to even greater levels, the damage will occur even more quickly. We will do to the grizzly, for example, what we have always criticized an earlier generation for doing to the bison.

Now that the country is finally beginning to focus on the threats to this most special place, we must assemble more of the hard facts necessary to guide our efforts. We have to build on the excellent work that the Greater Yellowstone Coalition has done and learn more about the problems and potential solutions. We need to determine the ecosystem's true boundaries. I urge these two subcommittees to make such fact-finding a top priority.

Future generations have every right to judge us by our success in saving the Yellowstone. They have every right to expect that we will do whatever is necessary to pass on to them what was passed on to us. Virtually every sign indicates that Greater Yellowstone can best live up to its economic potential if we allow it to live up to its natural potential. If, under these circumstances, we fail to do the right thing, we deserve to be judged harshly indeed.

Pulitzer Prize-winning author Wallace Stegner once wrote that the establishment of national parks was "the best idea we ever had." Now, if we are to preserve Yellowstone, and our worldwide reputation as a nation that is forward-looking, is the time for another great idea. Let us see the big picture and act boldly to recognize, comprehend and save the magnificent Greater Yellowstone ecosystem.

STATEMENT OF PAUL C. PRITCHARD
NATIONAL PARKS AND CONSERVATION ASSOCIATION

YELLOWSTONE ECOSYSTEM OVERSIGHT HEARING

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION
SUBCOMMITTEE ON PUBLIC LANDS

OCTOBER 24, 1985

Mr. Vento, Mr. Seiberling, and other distinguished members of these committees, my name is Paul C. Pritchard, and I serve as President of the National Parks and Conservation Association (NPCA). NPCA is a private, non-profit, membership organization, dedicated to promoting the values and purposes of the National Park System, and to working for the protection of national park resources so that future generations may inherit them unimpaired. It is from this perspective that we speak today on the Yellowstone Ecosystem.

Mr. Chairmen, the Greater Yellowstone Ecosystem is a complex, yet delicate, web of landscape and life. Adverse impacts in any one section of the web will, by the laws of nature, simultaneously effect all other sections of the web. In this testimony we will look at some of the potential and existing threats to the integrity of the resources of the Greater Yellowstone Ecosystem and we will discuss the lack of comprehensive, integrated, sustainable resource management among the various federal agencies.

The Greater Yellowstone Ecosystem consists of some 6 million acres of wild and semi-wild lands in parts of northwestern Wyoming, Montana and Idaho. The area encompasses two National Parks, Yellowstone and Grand Teton; the John D. Rockefeller National Memorial Parkway; seven National Forests, including: Beaverhead, Bridger-Teton, Caribou, Custer, Gallatin, Shoshone, and Targhee; two National Wildlife Refuges, Red Rock Lakes and the National Elk Refuge; and various state, corporate, and private lands. Many people feel that the greater Yellowstone area has become an ecological island, one which is administered by over 2 dozen separate political and administrative entities. Attached to this statement is a map which shows the geographic location of these lands.

The Greater Yellowstone Ecosystem has an immeasureable and irreplaceable wealth of natural resources. The vast significance of everything from geysers to grizzlies was recognized when Yellowstone became this nation's first

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National Park in 1872. The call for conservation of the unique resources of the Yellowstone area began back then, and has continued in increasing strength ever since. Yellowstone National Park is also highly significant as an international resource. Amid great fanfare, Yellowstone was set aside as a international Biosphere Reserve in 1974. In 1978, attention was again focused on Yellowstone as it was designated a World Heritage Site in September of that year.

As early as 1917, however, natural scientists began to recognize the fact that the boundaries of Yellowstone National Park were not adequate to fully protect the valuable resources within. In that year, Mr. E. W. Nelson, Chief of the U. S. Biological Survey, addressed the National Parks Conference here in Washington. In that address he discussed the Yellowstone elk herds, and in particular, the fact that the Park does not provide adequate winter range and that the surrounding lands outside the park were increasingly being lost to other uses:

"...In summer great areas on the mountains still afford good grazing for a much greater number of elk than now exist, but the lower country about the base of the mountains, which formerly served as a winter home of the elk, has been so occupied by farms and stock that both range and forage have steadily decreased."

"...The Park is surrounded by four national forests...in which grazing leases are issued either for sheep or cattle. Demands for such grazing privileges are rapidly increasing and would soon result in the use of all available feed up to the Park boundaries."

"...With natural conditions outside the National Parks disappearing rapidly, we need these large areas maintained in their nearly original wild state...We must guard all the wildlife carefully, for once destroyed, we cannot bring it back."

That sentiment is strongly echoed today. The current boundaries of Yellowstone National Park do not encompass a complete, interconnected ecological unit. It is increasingly apparent that they do not sufficiently protect the area's resources including its geothermal fields. Past superintendent John Townsley states, "I don't consider Yellowstone Park as an island that can be self-perpetuating. Recent pressure of population growth, mineral exploration and extraction, and energy development will change the character of the land around Yellowstone Park. All of these activities **in combination** become a tremendous threat to the whole Yellowstone ecosystem".

Yellowstone National Park shares borders with five National Forests: Bridger-Teton, Shoshone, Custer, Gallatin, and Targhee. It is commonly understood that these lands are mandated to be managed in a different manner than National Park lands, that is, primarily for multiple-use purposes. Often these mandates for management of federal lands come into conflict with one another. Some timber practices on these surrounding Forest Service lands, particularly those involving road building activity, will have a decided impact on the resources of the entire Yellowstone ecosystem. Wildlife, including grizzly bears and elk, that use these lands in migration to and from winter and summer range will be effected. These five National Forests, plus two others, are in the process of completing comprehensive forest plans that will dictate how these lands are to be managed for the next 10-15 years. It is necessary for these plans to take into account not only what is the best course of management for those particular forest lands but, also, which course would induce the least amount of impact on resources in the entire greater Yellowstone area.

One example of a timber practice that could have adverse impacts on wildlife that roam throughout the Greater Yellowstone Ecosystem is the proposed Kersey-Fisher timber sale in Gallatin National Forest. This sale is slated for Situation One (the most critical) and Situation Two grizzly habitat. The proposed sale is also adjacent to existing and proposed wilderness areas. Another concern is that critical riparian habitat, used by both grizzlies and moose, would be negatively impacted by road construction necessary for this timber sale.

The Greater Yellowstone Ecosystem contains a vast array of wildlife. Greater Yellowstone is "home" to trumpeter swans, wild bison, elk, Bighorn sheep, pronghorn antelope, a great variety of fish and avian species and more. However, the area is perhaps most noted for its population of grizzly bears.

The grizzly freely ranges over a vast expanse of the Greater Yellowstone Ecosystem. The Tepee and Cabin Creek Basins to the north, and Greyling, Gneiss, Cougar and Duck Creeks to the east are some of the most significant grizzly bear habitat in the Greater Yellowstone Ecosystem. Because grizzlies range over different parts of the entire Ecosystem during each season, bear management should be coordinated among all involved agencies to ensure coordinated and consistent protection for this threatened species. The primary objective of bear management should ensure that grizzlies are able to use important habitat with a minimum of human interferance. It is also vitally important that illegal poaching of grizzlies and unnecessary destruction of problem bears, two causes of decline in bear numbers, be addressed in these management programs. We are aware of the ongoing efforts of the Interagency Grizzly Bear Study Team (IGBST) and we support those efforts. We are concerned, however, that these efforts have not gone far enough. The major limitation of the IGBST is that it primarily focuses only on bear research, while ignoring the relationship that other actions, such as campgrounds in the park or timber sales on the forest, will have on the management of the bear. Other speakers today will address the grizzly issue in detail and should shed some additional light on the Interagency Grizzly Bear Study Team.

Elk, the most abundant of the ungulate species in the Greater Yellowstone Ecosystem, use the entire area for summer and winter range. The summer elk population numbers 25,000 to 30,000 and they use suitable range throughout Yellowstone National Park during the summer months. Wintering areas are far more limited. Yellowstone National Park does not provide a complete winter habitat for much of the elk herd, and consequently, they are ecologically linked to winter ranges outside of the Park boundaries. These areas include privately owned lands to the north and the National Elk Refuge just south of Grand Teton National Park.

One population of Bighorn sheep has a small but tenacious hold on habitat in the Teton Range in Wyoming. They number only 125 and are having to compete with non-native mountain goats for forage. This is particularly crucial in winter when the Bighorn population is already stressed and forage is marginal. On the western flank of the Tetons, in Targhee National Forest, the Bighorn is also fiercely competing with domestic sheep that are allowed to graze in that area. At one time, Bighorn's were common throughout much of the Greater Yellowstone Ecosystem, now they are isolated in only small parts of it.

The bison population of the Greater Yellowstone Ecosystem is unique to the United States. It is a large, relatively stable herd, numbering nearly 2,000 and is regulated primarily by natural processes. The bison are for the most part limited to the boundaries of Yellowstone National Park and to limited winter range to the north of the park. Domestic livestock grazing occurs within this winter range resulting in a mixing of the animals. The State of Montana considers bison to be a threat to livestock since they are one animal known to carry the disease brucellosis, even though there is no medical evidence which documents the transmittal of brucellosis from bison to cattle. Much of the furor over bison is based on a fear that, in reality, may not even be a problem. Even though domestic livestock are allowed to graze on critical bison winter range, the bison are still subject to elimination by state personnel should they be caught outside Park boundaries.

The moose populations of Jackson Hole, Wyoming are also suffering significant declines in numbers due to indiscriminate poaching and loss of habitat. Prime moose winter range has been replaced by the "urban sprawl" of the town of Jackson and associated subdivisions and communities. Nearly 125 moose a year are lost to poachers who have ready access to some moose habitats by extensive road systems in Bridger-Teton National Forest.

The magnificent trumpeter swan, another species that inhabits the Greater Yellowstone Ecosystem, is also fairing poorly. This subpopulation served as the core for the recovery of the swans in the 1930's. Critical habitat has been lost to development and their reproduction rates are low. A good example of critical habitat loss occured in the Hebgen Lake area, just outside of West Yellowstone. Greyling Creek and Duck Creek both flow into this lake that was, at one time, a prime nesting site for the Trumpeter Swan. Extensive construction of seasonal residences in this area, slated for a new ski resort, has forced the swan out of this area. Red Rock Lakes National Wildlife Refuge in Montana, Harriman State Park in Idaho, and Yellowstone National Park in Wyoming are some of the last remaining nesting sites of the swan. If the Greater Yellowstone Ecosystem is not managed as one entire ecological unit, the outlook for protected and complete nesting sites for the trumpeter swan is grim.

Probably one of the greatest threats to the natural resources of the Greater Yellowstone Ecosystem is the continual pressure to develop the geothermal features of the area to provide alternative energy sources for America. The entire Yellowstone Ecosystem has a vast amount of known geothermal resource areas (KGRA's). These include hot springs in Grand Teton

National Park and the John D. Rockefeller National Memorial Parkway, and the world famous geysers, hot springs, steam vents, and mud pots of Yellowstone National Park. It is interesting to note that of the 10 major geyser areas in the world, including Yellowstone, seven of these ten areas have been destroyed or damaged by geothermal exploration and development in the last three decades. Some of the losses include the Beowawe Geysers in Nevada that dried up in the 1940's, and likewise the hot springs in Steamboat Springs, Colorado. Due to intense geothermal development, the SPA in Switzerland also lies dormant.

The area facing the most serious threats from geothermal development is known as the Island Park Geothermal Area (IPGA). This area straddles the western and southwestern boundaries of Yellowstone National Park (see attached map). Over 130 lease applications for exploratory drilling and development are pending on lands within the boundary of the IPGA, and the area is still open to lease application. There are nearly 503,000 acres in the IPGA, 488,000 acres of which are federally owned and located primarily in Targhee National Forest. The other 15,000 acres are state and private lands. The Island Park Geothermal Area is a highly active seismic zone with major earthquakes occurring approximately every 25 years. The last two major seismic events were in 1959 and 1975 and they both altered the makeup of the geothermal features in the IPGA. It is our understanding the the Island Park Geothermal Area and the Yellowstone Caldera share the same magma heat source. There is also mounting evidence that the aquifer in the Gallatin Mountains outside the Park boundaries supplies the water for Yellowstone's geysers and has been linked through radio isotope studies. We believe that until it can be proven conclusively that geothermal exploration and development within the Ecosystem will not adversely effect the critical natural and thermal resources of Yellowstone National Park, such activities should be prohibited. It is unfortunate to note that the provision of law enacted in the last Congress which prohibits geothermal leasing on the 488,000 acres of federal land in the IPGA is being interpreted by the Interior Solicitor as applying only in FY 1985, since the rider was attached the FY 1985 Interior Appropriations Bill. We disagree with this interpretation and urge the application of this provision be clarified.

Another serious threat to the integrity of the Greater Yellowstone Ecosystem is oil and gas exploration and development. Leases have been issued in the last four years on the boundary of Yellowstone National Park that contain no stipulations protecting natural resources within. Not only will hydrocarbons be extracted from resevoirs underlying Park lands, but the leases are located in high risk earthquake areas and within habitat critical to the Park's wildlife populations. Nearly 30,000 acres of land in Gallatin National Forest are under lease along the boundary near West Yellowstone. Even larger tracts are under lease application in the Washakie Wilderness southeast of Yellowstone National Park and Targhee National Forest, located southwest of the Park. In the Beartooth Mountains of Custer National Forest, near Red Lodge, Montana, Petty-Ray Geophysical has been conducting seismic oil and gas exploration. This exploration affects the proposed Line Creek Wilderness area east of the Absaroka-Beartooth Wilderness Area. Bridger-Teton National Forest is considering reissuing 31 leases in Mt. Leidy Highlands and permitting exploratory drilling. This would greatly impact on important elk calfing grounds. The area lies across the historic migration route used by the Jackson Elk herd on its way to and from winter range. Part of the area is Situation One grizzly habitat also.

Hardrock mining exploration and development within the Greater Yellowstone Ecosystem has tremendous negative impacts on wildlife and water quality within. There are several mines that pose serious problems to the entire ecosystem. The proposed Homestake gold mine near Jardine, Montana is located in a historic mining development which has polluted Bear Creek and the mine site with arsenic. This new 10,000 acre mine, within the boundaries of the Greater Yellowstone Ecosystem, would lie in grizzly habitat and would affect elk migration routes. This proposed mine site also borders on the Absaroka-Beartooth Wilderness and Yellowstone National Park. In Montana's Custer National Forest a major platinum and palladium mine is being proposed in an area previously used as a chromium mine. The site is adjacent to the Absaroka-Beartooth Wilderness and is currently used as winter range for Bighorn Sheep. Potential pollution of the Stillwater River is a threat from this mine. Mining exploration for copper in the historic Upper Sunlight Basin mines is occuring in Wyoming. The entire area is currently under numerous mining claims. A bulldozer trail scars the alpine cirques of the North Fork of the Shoshone River and the upper Sunlight Basin. Indirect threats from mining exploration and development also pose serious problems for the entire Greater Yellowstone Ecosystem. The inevitable influx of people into the area and their need for homes, roads, and recreational pursuits, will increase the pressures already present in the Ecosystem.

Mr. Chairmen, there are examples of National Park Service actions which have adversely affected resource integrity, wildlife habitat, and so on. For instance, the NPS has been criticized for its decision to establish a major campground in prime moose habitat along the Gros Ventre River in Grand Teton National Park. Similarly, the NPS has been severely criticized for its decision to construct Yellowstone's Grant Village development within important grizzly habitat. This decision was rendered even more objectionable when the NPS continued to operate the Fishing Bridge complex simultaneous with operation of Grant Village - even after agreeing to eliminate Fishing Bridge facilities as a condition of constructing Grant Village during Endangered Species Act consultations with the U.S. Fish and Wildlife Service. To their credit however, Yellowstone National Park is currently putting the finishing touches on the Park System's first comprehensive winter use plan. This plan will examine the tremendous increase in off-season visitation at Yellowstone, and will attempt to provide guidelines for managing this use so that park resources, particularly bears and ungulate species, will not suffer under winter visitor use pressures. Clearly, all agencies managing land and resources within the Greater Yellowstone Ecosystem must be held accountable for their actions. The National Park Service should not be exempt from this rule.

Mr. Chairmen, the Greater Yellowstone Ecosystem is truly unique. It has been described as "the largest essentially intact wild ecosystem remaining in the temperate zones of the earth". Unfortunately, the administration and maintenance of the area is fragmented. This disjunct management will compromise the integrity of the entire ecosystem. NPCA believes that resource management within the Ecosystem must be integrated, coordinated, and based on consistent criteria for protection of natural system health.

Mr. Chairmen, we have referred above to the international significance of Yellowstone as evidenced by its selection as an international Biosphere Reserve under UNESCO's Man and the Biosphere Program (MAB). Biosphere Reserves form a global network of scientifically-oriented protected areas. Presently there are 243 international Biosphere Reserves worldwide, 19 of which are administered by the National Park Service here in the United States. The expansion of the current size of the Yellowstone Biosphere Reserve would bolster the image of leadership and vision the international community has come to expect from the United States.

Central to the concept of a Biosphere Reserve is the conservation of large units of landscape containing both natural undisturbed ecosystems, in which there is little human impact; and managed ecosystems, in which there is human control or influence on natural processes. An ideal Biosphere Reserve would contain many types of land uses and human activities - a working landscape if you will - with man as an integral component. Unfortunately, few, if any established Biosphere Reserves approach the ideal. We believe the United States should seize this opportunity to provide leadership to the world community and create model Biosphere Reserves which will truly demonstrate the unique approach to resource conservation, management of protected areas and sustainable development the MAB program represents.

In the idealized model, the heart of the Biosphere Reserve is the core area, strictly protected and maintained free of human disruption to conserve a representative example of the ecosystem of one of the world's major natural regions. It is a place where natural processes, including biological evolution, continue undisturbed, and where as much of the region's biological diversity is included. Thus, it serves as an ecological standard against which to measure the effects of human uses outside the core. With few exceptions, the Biosphere Reserves in the U. S. contain only this core area.

Surrounding this core area in the idealized model, are areas managed for agriculture, grazing, timber production, fisheries, intensive recreation, or other economic uses of natural resources. The emphasis within this cooperative zone about the core area is the demonstration and utilization of sustainable development and resource utilization practices which minimize impacts on natural processes and genetic resources, and which are absolutely protective of the core area. Knowledge gained from this program can be useful for guiding resource management here at home in direction of sustainable and responsible practice, and can be exported to other nations grappling with comparable problems. Indeed, one of the key aspects of the Biosphere Reserve program is that it serves to demonstrate the value of conservation to the people most reliant upon, and responsible for, sustainable resource management.

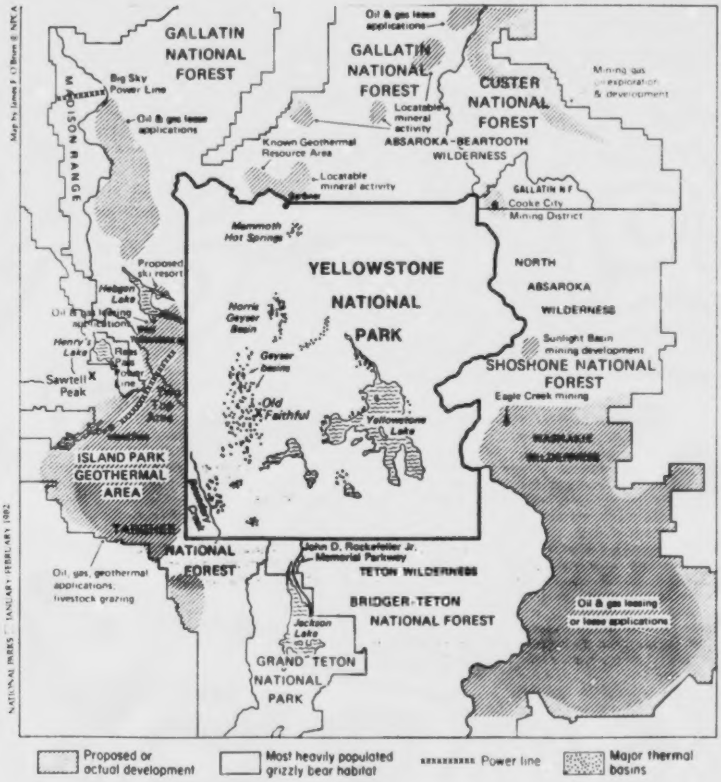
There is a need for expansion of our Biosphere Reserves to include not only the National Park core areas, but also those working landscapes surrounding the core where cooperative management is essential and sustainable development practices can be perfected and demonstrated for the benefit of this nation and the world. Several examples come to mind, Olympic National Park, Glacier National Park, Sequoia-Kings Canyon, and Everglades. But, we can think of no better place to begin than the ecosystem where those visionary explorers first articulated the idea of protecting important natural areas in perpetuity...Yellowstone.

What better place could there be for the United States to demonstrate to the world how an ideal Biosphere Reserve can be established and managed? Yellowstone has served as a model for the nations of the world for almost 115 years as the first national park. It is time for the United States to broaden the scope of international thought on protected area management via the Man and the Biosphere Program and Yellowstone. We propose the expansion of the core natural zone boundaries to include Yellowstone and Grand Teton National Parks the John D. Rockefeller National Memorial Parkway, and the two National Wildlife Refuges. The working landscape or zone of manipulation could include those multiple-use federal lands surrounding the core area and various corporate and private lands. Such an expanded Biosphere Reserve, encompassing the entire Yellowstone Ecosystem, would send an important message to the world about our commitment to protect this unique area, and it would impress upon land managers in the Ecosystem the global significance of their resource management decisions.

Mr. Chairmen, I sincerely appreciate the opportunity to testify today. I will be happy to answer any questions you may have.

Thank you.

Encroachment of Energy Development in Greater Yellowstone Ecosystem–1982


GALLATIN NATIONAL FOREST
MADISON RANGE
Big Sky Power Line
Oil & gas lease applications
Known Geothermal Resource Area
Locatable mineral activity
Oil & gas lease applications
GALLATIN NATIONAL FOREST
Locatable mineral activity
CUSTER NATIONAL FOREST
Mining gas oil exploration & development
ABSAROKA-BEARTOOTH WILDERNESS
GALLATIN N F
Cooke City Mining District
Mammoth Hot Springs
YELLOWSTONE NATIONAL PARK
Norris Geyser Basin
Geyser basins
Old Faithful
Yellowstone Lake
Proposed ski resort
Hebgen Lake
Oil & gas leasing applications
Henry's Lake
Raes Pass Power line
Sawtell Peak
ISLAND PARK GEOTHERMAL AREA
NATIONAL FOREST
Oil, gas, geothermal applications; livestock grazing
NORTH ABSAROKA WILDERNESS
Sunlight Basin mining development
SHOSHONE NATIONAL FOREST
Eagle Creek mining
John D. Rockefeller Jr. Memorial Parkway
TETON WILDERNESS
BRIDGER-TETON NATIONAL FOREST
Oil & gas leasing or lease applications
Jackson Lake
GRAND TETON NATIONAL PARK
Proposed or actual development
Most heavily populated grizzly bear habitat
Power line
Major thermal basins

Map by James F. O'Brien © NPCA

NATIONAL PARKS JANUARY-FEBRUARY 1982

The Conservation Foundation

Testimony of Christopher J. Duerksen
Senior Associate, The Conservation Foundation
before the
Subcommittee on Public Lands and
the Subcommittee on National Parks and Recreation
of the House Committee on Interior and Insular Affairs
October 24, 1985

Good Morning. My name is Christopher J. Duerksen. I am a senior associate at the Conservation Foundation here in Washington, D.C. My organization very much appreciates the opportunity to testify at this hearing on the important issue of managing the Greater Yellowstone Ecosystem. We commend the Subcommittee on Public Lands and the Subcommittee on National Parks and Recreation for their foresight in focusing on this critical issue.

The Conservation Foundation is a non-profit policy research and education institution based in Washington, D.C. Since its founding in 1948, the Conservation Foundation has been dedicated to improving the quality of the environment and to promoting wise use of the earth's resources, both natural and man-made. We emphasize action-oriented research to influence policy. The foundation recently published a book, which I coauthored, entitled National Parks for a New Generation, which was the result of over three years of research on the National Park System and Service. As part of that research, we focused a good deal of attention on resource management in and around

Yellowstone National Park. I would like to share some of our findings with you today.

Before doing that, however, I would like to say a few words about my personal experiences in Yellowstone, because I think it is easy to lose sight of just how wonderful a place it is when we start discussing problems, government programs to address those problems, and the like. It was in the upper Yellowstone River Valley that I first heard elk bugling, an eerie sound that captures the essence of wilderness. It was here that I caught (and, in keeping with park regulations, released) the biggest trout I have ever hooked in my life--a two-foot long cutthroat beauty that had inhaled a tiny size 22 dry fly. I won't tell you exactly where I caught that one. I could go on and on about my deep feelings for this place. It is truly a national treasure, rightfully the flagship of our acclaimed National Park System.

We all recognize, however, that despite outward appearances, the Yellowstone ecosystem is under great stress. I got my first inkling of that when I spent a week in what I was told was bear country in the Thorofare Wilderness above Yellowstone Lake. My companions and I didn't see or hear anything that remotely resembled a bear. Later we learned that in truth the grizzly bear population was teetering on the edge of extinction in the park because of intrusions on its natural range which extends outside park boundaries. Even though Yellowstone has the most acreage of any park in the lower United States, for many species, particularly large mammals, it does not encompass an entire ecosystem. As park historian John Ise has observed, "boundaries ran up and down mountain ranges, across rivers and valleys, with no regard for the problems of administration and protection." Thus while Yellowstone National Park is a vast expanse, larger than the states of Rhode Island and Deleware combined, it reflects less considerations for Mother Nature than for political realities and the serendipity of a neat square carved out of unchartered territory at a time "ecosystem" wasn't even a word.

This fact makes dealing with the growing pressures on the park very difficult. And no one should doubt that those pressures are very real and very serious. Within the park we saw the impacts of over 2 million visitors who crowd the roads and attractions every year, particularly during the summer. Managing the intense visitation to a few extraordinarily sensitive areas and controlling its effects on the resources might well be enough of a challenge to park managers. But they must also deal with external influences activities in the five adjacent national forests and on private lands outside the park. Yellowstone's vulnerability to off-site environmental pressures typifies the dilemma facing national parks today.

Even the extensive buffering by adjacent national forests offers insufficient protection. As discussed in our book, National Parks for a New Generation, in 1982, 70 individuals and corporations applied for geothermal leases on land in a national forest area west of the park. One site, only a quarter mile from a thermal area inside Yellowstone, raised widespread concern about the effect of geothermal drilling on Yellowstone's geysers, but no one really knew any answers. On the east, plans for oil and gas exploration raised fears about grizzly habitat. The national uproar over these plans has been stilled by changes in energy economics, which diminished commercial interest, but the threat remains. And a 1980 Park Service report detailed a host of other potential impacts on Yellowstone from sources outside its boundaries--for example, from logging, grazing, housing developments, and acid rain. These pressures and potential impacts from surrounding areas will only grow worse in the future, not better, unless mechanisms are put in place soon to address them.

What should be the responses to these serious pressures? While we recognize that the purpose of these hearings is to help compile a record of the current condition of resources and efforts to protect them, we think it important to remember that Yellowstone has always been on the cutting edge of innovative solutions to administrative and management problems facing the entire National Park System. In the early days, park officials grappled with the tough problem of poaching. They successfully opposed proposals to build an elevator by Yellowstone Falls in the 1890s and to dam Yellowstone Lake in 1920. Almost a half century later, in the early 1960s, the service killed off thousands of elk to deal with a large herd of animals, triggering a seminal study of wildlife management in the parks. In 1970, a father's lawsuit, prompted by his son's fatal fall into the Old Faithful geyser, catalyzed debates over safety and visitor protection throughout the park system. Today, the struggle to save Yellowstone's grizzly bears symbolizes the Park Service's strengthened commitment to resource protection and natural systems management.

We believe that Yellowstone can--indeed must--serve as a national model for dealing with similar types of problems that all National Parks increasingly face. There are some clear plusses in the Yellowstone situation which auger well for the future. First, much of the so-called greater Yellowstone ecosystem is on federal lands thus making remedial measures easier, at least in theory. Also, the National Park Service has already begun work with other agencies through the Interagency Grizzly Bear Task Force. Of course, many challenges remain. Each federal agency has its own mandate and constituencies. Jurisdiction over the "ecosystem" remains fragmented. We believe the agencies involved can and must do better.

There are a variety of possible steps to be taken to meet the challenges of managing National Park resources in an era of growth and change. Administrative responses like the Grizzly Bear Task Force are one important component, but we are convinced that more is needed. In our new book on the National Park System, we discuss in detail other possible responses:

1. An accentuated system-wide focus on resource management with greater emphasis on research and monitoring--what we call Preservation '95.

2. Consensus-building and negotiation approaches patterned after the habitat protection planning process under the

Endangered Species Act and the consistency provisions of the Coastal Zone Management Act.

3. Provisions patterned after the recently enacted coastal barriers legislation that removes federal subsidies for activities that might damage coastal resources.

4. Public-private partnerships involving land trusts and state and local governments now being tested in Florida around Everglades National Park.

We would be very happy to discuss these and other possible responses with you in the future.

In closing, I would like to reflect back on the small group of men who sat around a campfire over a century ago in the remote Yellowstone wilderness. They could hardly have foreseen the complexity, in modern times, of preserving Yellowstone's resources for people's enjoyment and benefit. Because they were able to see beyond the ideas and institutions of their day, Yellowstone remains a wonder. This vision, as much as an awesome physical place, is their legacy and continuing challenge. Thank you very much.

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October 22, 1985

TO: Hon. John Seiberling
Chmn, Subcommittee on Public Lands

Hon. Bruce Vento
Chmn, Subcommittee on National Parks and Recreation

SUBJECT: Joint Oversight Hearing on Greater Yellowstone Ecosystem

FOR THE RECORD: Statement of Bob Garner, 916 S. Willson, Bozeman, MT

Fighting over territory has long been a part of social behavior among many kinds of animals. Among certain elite students of life, much is said today of the grizzly bear's need for extended territory, and of the elk's need to migrate and find security and food during various seasons of the year. Biological urges and instincts play a dominant role in the lives of these and other animals, who depend on narrowly constructed physical niches to nourish that genetic information which scientists say provides these creatures with an inborn definition of themselves.

Human beings are genetically informed, just like the elk and the grizzly bear, but we are less dependent on confined spaces for our physical survival. We are much more able to adapt ourselves to varying environments, and in that ability perhaps we find a clue to the numerous successes of our species.

Fighting for territory still continues among human beings, but not always is this competition based on the existence of needed physical resources and critical habitats. Or so we sometimes would think, as our adaptability leads us to more abstract social identities than that enjoyed by the elk and the grizzly bear.

This joint oversight hearing being conducted by two subcommittees of the U.S. House of Representatives is an appropriate example of a territorial battle being fought in an abstract arena. The grizzly bear, the elk, and those human beings who actually depend for a living on the resources of the so-called Greater Yellowstone Ecosystem, are inherently informed of their biological and social needs, based on their immediate proximity to the resources they depend upon; yet arguments are taking place, allegedly on behalf of this "ecosystem" and its inhabitants, by many people who have never set foot in this region, and probably never will. This raises strong questions as to the motives of these two committees and the political organization known as the Greater Yellowstone Coalition.

None of the animals in the Greater Yellowstone area, and few of the people, are aware that these hearings are taking place. If the Greater Yellowstone Coalition deserves credit for anything, it is for its ability to cater to distant legislative committees, to benefit its own definitions and claims for territory, without confronting directly the competing interests and cultural values of local citizens who have been kept in the dark about these hearings. There has to be a reason why the Greater Yellowstone Coalition prefers to discuss these matters in Washington, DC, rather than in Montana, Wyoming or Idaho, where the definition of an ecosystem directly affects people's lives and livelihoods; and I suspect the primary reason is that so many people in Washington, DC are ignorant of life in the so-called Greater Yellowstone Ecosystem, whereas so many people in Montana, Wyoming and Idaho are not.

I want to be as brief as possible in my comments for the record of these Congressional hearings, so I will trust that other details of the record may be used to expand upon my own testimony. Rather than duplicate what others are likely to say about the need to protect grizzly bears, elk, jobs, a variety of recreational pursuits (including the very seriously threatened motorized variety, such as snowmobiling and trail bike riding, etc.), I would like to help the members of these subcommittees to understand the ecosystem concept in a much more inclusive and democratic way than that being promoted by the Greater Yellowstone Coalition.

Specifically, it is my goal to remind our Congressmen and interested citizens of the fact that our earth is subject to many forces, from within and without its surface, and that not all of these are acknowledged by the Greater Yellowstone Coalition's definition of a Greater Yellowstone Ecosystem.

It is a fact that we all tend to see ourselves in a short space of time, and have difficulty, for example, imagining that life as we know it has not always existed, and that seas may have covered where we now stand. Mud, sand, heat and pressure are referred to repeatedly as having played a dominant role in the creation of our lives. Biologic and geologic sciences, in fact, are redefining the way we worship our origins, and the Greater Yellowstone Coalition is one of many organizations attempting to use this "scientific" data to redefine collective spiritual and social values in ways which conform to their own. I would warn the Subcommittee on Public Lands and the Subcommittee on National Parks and Recreation, that this is the most serious threat to our freedoms represented by such groups as the Greater Yellowstone Coalition.

When scientists outline a narrative which has seas dominating a major portion of our world, then has them retreat, become shallow and disappear, we have to remember that theories abound as to how this all took place. Plants exploited opportunities to develop themselves, as did primitive fish and amphibians. These plants and animals were subject to the same forces and changes as have always affected life. They died and were transformed. Coal, oil and natural gas became part of our environment, as the natural exchange of one form of life's energy with another continued to take place in time.

Dinosaurs appeared and disappeared. Comets and meteors penetrated earth's space, a nuclear invasion which may have tilted earth's axis and rearranged the apparent orderliness of flora and fauna clinging tenuously with shallow roots to time and history.

Mountains came and went. Crusts cracked and metal melted. Earthquakes, volcanoes, new mountains, new valleys, new exploitations of the calms between the storms. Deserts replaced seas, and life on the surface changed accordingly. Climates were hot, then cold, wet then dry. Deep snows and glaciers gave way to runoffs which cut deep valleys into the earth. Rivers were dammed and then turned loose. None of life's niches has ever been secure, no ecosystem has ever remained untouched.

During the last 120 years, nearly fifty major earthquakes have broken the peace of Montana mountains from Kalispell to Yellowstone Park. Just the other day, within a 24-hour period, 324 tremors were recorded in an area between West Yellowstone and Madison Junction in Yellowstone Park. Nothing remains quiet and unthreatened. Elephants and dinosaurs vanished in their own time, to be replaced by elk, sheep, bears, eagles, trout and human beings.

No orderly chain of events has brought us to where we are, unless we view cataclysms and chaos as containing a creative order which we understand only through worshipping what we fear. We are awestruck by death which creates new life, and we are either strengthened or weakened by this reverence.

What we now want to call the Greater Yellowstone Ecosystem is not a permanent place. Life is nomadic, no matter what the form, the borders or the politics. No less pure or priceless than gems we find in the ground as evidence of past terrors which have plagued the earth, the so-called Greater Yellowstone Ecosystem is a treasure in a variety of ways, not just one.

Volcanic pressures affect human societies as well as grizzly bears. None of us are in the driver's seat for very long, and even when we think we are, it is only an illusion. Pushing and shoving is a magic part of life which creates new essences out of old. Guns and horses have shaped the Yellowstone Ecosystem every bit as much as mud flows and the solidification of unimaginable heat and pressure. Shoshonis once moved like lava across eastern and central Montana, driving everything in front of them out of the way until they stopped and formed brief moraines of sedimentary society. No chief's authority was ever absolute, and the families, bands and tribes sought visions as they were moved by forces beyond their ken to places where they may never have been before.

White men moved behind the Shoshone, propelling the Blackfeet into action as well.

Volcanoes and geysers continued to erupt as different cultures shocked one another with varying degrees of force. Alliances were formed as new fears uplifted new myths. "Bird People" -- the Crows or Absarokas -- broke from their Sioux brothers and sisters and moved west, breaking again into separate groups. The River Crows and the Mountain Crows deposited many myths in the Yellowstone Ecosystem, where they formed alliances with white soldiers and settlers to protect themselves against the relentless tremors of life's powers which flowed through the threatening bodies of the Blackfeet and the Sioux.

Smallpox, war, meteorites, gold, George Custer, Dog Soldiers, miners, trappers -- these are all forces of biology and geology blending to erode and corrupt the imagined sanctity and purity of what proceeded them.

Scientists disagree in their definitions of what took place before today and what will happen tomorrow; and in that theoretical void, life takes place. Politicians and biologists should fear to tread where greater forces have not survived.

There are people in the so-called Greater Yellowstone Ecosystem, and they play a part in the mythology, geology and theology of life here, which no mere biological definition of ecology will ever comprehend. Life is never protected when we set it aside unused. We must be careful how we try to interfere with ourselves. Who among us can really say where an ecosystem begins and ends, and what should be contained within it?

We must go slowly with any legislation which proposes to control the vitality of our lives to such a degree as the Greater Yellowstone Coalition proposes. Their list of "threats" to this area represents a very narrow view, which is a serious threat in itself. We need to broaden that view before taking any action to define popular anxieties as "law."

I hope my own brief narrative serves its purpose. We should be careful how we use abstract social weapons such as politics to dominate people's lives. There is more to the Greater Yellowstone area than this committee is going to hear about. I have hoped to hint at that, but only by living it can a fact be really a fact. I hope our Congress and groups such as the Greater Yellowstone Coalition will find in their deliberations the courage to leave people alone, as well as geysers and grizzly bears. All of us need to be allowed to live, in a variety of natural ways, not just that one which receives political sanction as the only definition of truth.

Thank you.

Sincerely,

Bob Garner
Bozeman, Montana

WRITTEN TESTIMONY FOR THE HEARING RECORD ON THE YELLOWSTONE ECOSYSTEM BEFORE THE SUBCOMMITTEE ON PUBLIC LANDS AND THE SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION

Vince Heier

My name is Vince Heier. I am the Timber Manager for McFarland Cascade, Idaho Pole Division in Bozeman, Montana. I am a 37 year old native Montanan and have resided in the Gallatin area of the Yellowstone for my entire life. I have committed my life to leaving my environment in better condition than I found it. For this reason I chose Forestry and Timber Management as my chosen professions. I am a true conservationist and believe that man's inclusion in the environment is not necessarily bad.

The Ecosystem form of management which is currently being pushed is nothing new. It has been practiced in the political arenas of Europe as "Green Politics" for a long time. However nice and flowery it might seem up front, it is nothing more than disguised protectionism which seeks ultimately to expand Wilderness and protected areas from man through political means. Any form of environmental control or management which ultimately seeks to exclude the human specie as a viable and legitimate link in the ecosystem's chain is not only wrong but has the potential to be destructive to the one thing we all view as a basic cornerstone in the foundation of the United States. That basic thing is human rights. Yes, we humans have rights too! As the superior specie on Earth, we humans pass laws to protect Snail Darters, Prarie Dogs and Grizzly Bears. We pass laws to create vast expanses of Wilderness, Parks and Special Management areas to protect these plants and animals. In our zealousness to 'protect', we begin to 'exclude' from this environment the one creature that all of this ecosystem is most linked to. This creature is man. The human specie. The one creature capable of conscious thought, memory and problem solving. The one creature capable of fixing, changing, and benefiting his specie and it's confines.

Progress, change and planning have all come to be words with bad meanings. Why? Because in our zealousness to protect the environment from the evils of man, we have largely excluded man from using the tools and knowledge he has available to him to protect the environment from the ravages of Mother Nature.

The Greater Yellowstone area is currently facing the greatest threat it has ever faced in terms of environmental destruction. This threat is not caused by man. Quite the contrary, it has been allowed to develop to it's present danger in spite of us. Even though the technology and science exists to prevent this iminent catastrophy, our own laws and regulations will prevent it. The danger which exists and the destruction which will happen is fire. A major fire or fires will happen in and around Yellowstone Park in my lifetime. Knowledgeable experts within the Forest Service say we are within a 20 year period when catastrophic fire could happen at any time.①

The timber stands which largely are a result of the major burns of 1910-1911 are now once again in the same degraded, dead and diseased state they were back then. Nature has taken it's course. Once again it will burn. The difference this time is that now there are large numbers of people involved. It will burn because man has protected these valuable resources from himself. Instead of young and vigorous stands of timber which are resistant to disease and insects, we are faced with dead and decadant timber stands which will be lost to all life forms.

Yes, we do change our environment when we harvest timber but so do we all benefit. The timber grows again, the land heals and the process starts again. Nature is not so forgiving. Large fires, volcanoes and earthquakes simply do not give any options to mitigate the destruction. People and animals die. The entire ecosystem is changed completely, sometimes forever.

To allow continued protection of resources with the exclusion of man is to be playing "Russian Roulette" with the environment and man being the person with the gun to his head.

We must all stop, look around and realize that man is an integral part of any ecosystem and while it may serve some species some benefit to exclude or drastically impair man's presence, it may in the long run prove disastrous to the 'ecosystem'.

You, the lawmakers of our country, are embarking on a step toward the establishment of "buffer zones" around Yellowstone Park using the ecosystem form of management as the disguise. You will have to answer many questions and ask many yourselves. The answer will never be 'crystal clear' and sometimes your choices will seem ridiculous. However, as you make some choices and propose some changes in the management of our public lands, please consider the following facts:

A. In addition to the nearly 2 million acres of Yellowstone National Park

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①Cooperative Forestry and Pest Management Study, 1982. Status of Mountain Pine Beetle, Northern Region (M. D. McGregor; R. D. Oakes; H. E. Meyer; June, 1983, See appendix 1, 2 & 3).

which is protected from resource development there are 9 wilderness areas totaling more than 3,355,000 acres adjacent to and bordering the Park which are Federally protected. This Federally protected 'Ecosystem' area is over 5,300,000 acres or 8,300 square miles.

B. In addition to the above wilderness areas there are several wildlife refuges in Idaho, Montana and Wyoming as well as the Grand Teton National Park which border or are adjacent to these wilderness areas. The total for these likewise Federally protected areas is approximately 420,000 acres or 650 square miles.

C. There also is a wilderness study area call the Hyalite, Porcupine Buffalo Horn S393 which is directly North and adjacent to Yellowstone National Park. It comprises an area approximately 35 miles long and 8 miles wide (155,000 acres). It has been protected since 1977 and the Forest Service has recommended over half (120 square miles) of this area for scenic and wildlife protection in it's Draft Forest Plan.

The total existing protected ecosystem acreage for the Greater Yellowstone is then over 5,800,000 acres or 9,100 square miles. This is an area in approximate size to the States of Delaware, Connecticut and Rhode Island combined.

This currently protected 'Ecosystem' is equal to a strip of land which is 5 miles wide extending the length of the entire Eastern Seaboard from Caribou, Maine to Miami, Florida! You are being asked to make it 8 miles wide.

This area is only in the Greater Yellowstone Ecosystem. There are many millions of acres of other protected lands in Montana, Wyoming and Idaho in relative close proximity to this ecosystem. The only public land available for the average recreationists, timber producers, miners, oil and gas producers and ranchers are those public lands outside of the above mentioned protected lands.

43% of the one small national forest that is my home (Gallatin) is wilderness. The Forest Service is proposing 72% of my forest for wilderness or roadless protection. Those of us who live here and try to eke out a meager living in one of the basic industries have been and are being discriminated against through protectionism. The area described as the Greater Yellowstone Ecosystem has a history of mining, logging and cattle ranching dating back into the 1850's. Yellowstone Park was created after years of work by the frontier miner, logger and cattleman. Through all the years, with all the concern about development of the areas in and around Yellowstone Park, these wildlands remain in their natural state. Now, however, zealous attempts to protect all remaining lands through "Ecosystems" is threatening to cause the worst renewable resource loss by fire these states have ever seen.

To allow any further productive timberlands to be locked up in the name of environmental concern would be paramount to signing a death certificate for the Yellowstone. No one will benefit. Jobs will be lost; people will be displaced; cities and counties will be devastated by revenue loss and drains on their support systems; the Griz, Elk and other game animals will die or be forced into other ranges where they will starve and dwindle away; the flora will change; erosion and siltation will result in depleted fisheries and most importantly low water quality and flooding will result. These are only some of the devastating side effects that will result when major fires come to clean up the existing mess. Notice I said when and not if.

I could bore you to death with fuel loading statistics, historic fire patterns and current firefighting capacities but I believe you get the picture. Vegetative manipulation or logging or whatever you wish to call it, is not done because it is economic, esthetically pleasing or environmentally perfect. It is done because it is necessary. It is the only alternative to nature's way ––– fire.

I ask you to please consider the points I have raised and be extremely mindfull of the lives and resources which will inevitably be displaced if "ecosystem" management is allowed to continue. Please remember that we humans are not only a viable part of that ecosystem but I might add - the most important part. Oh, that I and my family had the protection afforded the Grizzly Bear!

Thank you for the opportunity to comment on this issue and please make these comments part of the official record.

STATEMENT OF

DAVID SCHAENEN

Mr. Chairman and members of the Committee:

It is a pleasure to appear before you today to discuss the "Greater Yellowstone Ecosystem" which is of considerable interest and concern to those of us who reside in the West because of the implications which it would have on the management of lands located therein. My name is David Schaenen, and I am an oil and gas and public lands consultant, as well as a small oil and gas operator, who resides in Billings, Montana.

I am also Chairman of the National Public Lands Advisory Council. The Council is comprised of 21 citizens who advise the Bureau of Land Management Director and the Secretary of the Interior on policies and programs related to the resources and uses of public lands under the jurisdiction of the Bureau. At the Council's last meeting, the members discussed the proposed Greater Yellowstone Ecosystem and the implications that it could have for certain multiple-use lands managed by the Bureau of Land Management. I was authorized by the Council to invite National Park Service Director William Mott to join us at our upcoming meeting in Washington so that we might discuss the matter more fully. This Congressional hearing was scheduled in the interim, before that meeting could take place. Although the Council has not as yet formally acted on the proposed Greater Yellowstone Ecosystem, the majority of our members have endorsed my sharing some of the Council's concerns about such a proposal with you.

While much of the information on the Greater Yellowstone Ecosystem is somewhat sketchy, particularly as to the tentative boundaries or at least the general outline of the lands to be encompassed therein, we believe that this "Ecosystem" refers to the area within the States of Montana, Wyoming, and Idaho, which contain the Yellowstone and Grand Teton National Parks, Red Rock Lakes National Wildlife Refuge, the National Elk Refuge, and portions of the Gallatin, Custer, Shoshone, Bridger-Teton, Caribou, Beaverhead, and Targhee National Forests.

Yellowstone National Park encompasses an area of approximately 2.2 million acres and Grand Teton National Park takes in 300,000 acres, with those portions of the national forests to be included in the Yellowstone Ecosystem totaling an additional 3.9 million acres. These national forest lands would, in effect, serve as a partial buffer zone around the parks. According to the media, the total area to be encompassed within the boundaries of the Greater Yellowstone Ecosystem would be over 8.5 million acres which would be managed as a single ecological unit. This means that in addition to the 6.4 million acres mentioned above, approximately 2.1 million acres of Bureau of Land Management, private, and State lands would also be included within this single unit.

It is because a substantial amount of public domain lands, falling under the jurisdiction of the Bureau of Land Management, lie within this area, that I appear before you today to express the concerns of the National Public Lands Advisory Council that Congress and the U.S. Government not be hurriedly pushed into an action that would provide an additional 2 million acres of de facto wilderness.

By now you will already have heard of the meaning and significance of the Greater Yellowstone Ecosystem with its natural, cultural, and recreational resources and their associated economic and environmental values, and you probably have learned of the various resource uses, and their relative benefits and potential conflicts among them. Inasmuch as the Bureau of Land Management is charged by the Federal Land Policy and Management Act with "management of the public lands and their various resource values so that they are utilized in the combination that will best meet the needs of the American people," let me state that I am concerned as to the ability of the American people to continue to utilize these lands, which are owned by them, either as public lands or as private lands, and which would generally become in-holdings within this ecological unit.

It is important that these lands be used by future generations for renewable and non-renewable resources including, but not limited to, recreation, range management, timber, minerals, including oil and gas, watershed, fish and wildlife, and natural, scenic, scientific, and historic values. This multiple-use concept does not imply that the lands will be used principally for the preservation and advancement of wildlife and recreation, as is being advocated by certain parks management personnel and environmental groups.

Because of the somewhat elusive boundaries to the Ecosystem, it is very difficult to tell exactly what lands would be included, and therein lies an additional part of the problem. When our National Parks were set up, they were given separate and distinct boundaries based on the assumption that there were sufficient lands located within those boundaries so as to provide adequate protection for the beauty of the resources located therein. Now we are being told that this concept no longer holds true and that additional lands are needed to protect and preserve these scenic beauties and the wildlife which roam on and around the park preserve.

The National Public Lands Advisory Council believes that the evolution of a process such as the Greater Yellowstone Ecosystem could result in the creation of a buffer zone by another name. The Council has previously expressed its concern to the Secretary of the Interior about administratively establishing buffer zones around wilderness areas and National Parks and stated its opinion that only Congress has authority to delegate such powers over the use of public lands. A copy of the Council's July, 1984, resolution on this matter is attached to my statement. It has been the Council's feeling that earlier introduced legislation, which dealt with establishment of indefinite boundaries around areas defined in that legislation, would impose restrictions that would seriously impair any attempt to manage the surrounding lands and the multiple uses of these lands, including recreation and wildlife. The Council has been greatly concerned about the jurisidiction and supervision of those lands located within Ecosystem boundaries, because the managing agencies seem to have varying jurisdictional responsibilities.

The Bureau of Land Management, as charged under the Federal Land Policy and Management Act, is required to manage the public lands and their various resource values in those combinations that will take into account the long-term needs of future generations for renewable and non-renewable resources. The U.S. Fish and Wildlife Service is the principle agency through which the Federal Government carries out its responsibilities to conserve, protect, and enhance the Nation's fish and wildlife and their habitats for the continuing benefit of people. The Forest Service, within the U.S. Department of Agriculture is responsible for Federal leadership in forestry, and it carries out this rule through four main activities:

1) Protection and management of resources on 191 million acres of National Forest System lands;
2) Cooperation with State and local governments, forest industries, and private land owners, to help protect non-Federal forest and associated range and watershed lands;
3) Research on all aspects of forestry, rangeland management, and forest resources utilization;
4) Participation with other agencies in human resource and community assistance programs, to improve living conditions in rural areas;

and lastly, the National Park Service, which was established to provide cohesive administration of the Federal Park Lands under the Department of the Interior's jurisdiction. The Service is congressionally mandated to "promote and regulate the use of the Federal areas known as national parks, monuments, and reservations, by such means and measures as conform to the fundamental purpose of said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

It is our concern that there may be a movement within the Park Service that the supervision of these lands outside of the immediate boundaries of the Yellowstone National Park could be best served under their aegis - to us this means that the lands would be managed for single-use and the activities of those operating within this unidentified area would be severely restricted as to any development of private lands or of public domain lands under the jurisdiction of the BLM.

A basic question for consideration is the impact of the creation of such an ecological unit on the people located within the boundaries of the system. It seems to us that these people would basically become in-holders within this indistinct area, and how they will be treated and how their rights will be preserved are of critical importance to the Advisory Council. Looking at the number of counties involved and the populations located within those counties, it becomes apparent that this is not an inconsequential problem and that thousands of people must be involved. Also involved would be their ability to sustain their present livelihoods, and carry out a useful and beneficial economic existence on lands which they presently use. I believe you should consider the economic impact, not only on these individuals but on the respective county governments and their ability to sustain their normal, every-day operations. These are extremely serious problems which cannot be passed over lightly in an effort to hurriedly set up the concept known as the "Greater Yellowstone Ecosystem."

Park boundaries serve a useful purpose - they establish a point whereby special protection should be given to lands within. Parks were established for the prople and are to be maintained so that the people can continue their enjoyment of the resources. However, the local and State governments, who are through no fault of their own located adjacent to the National Parks, should not be asked to sacrifice their growth and economic well-being because of perceived threats to the park resources without adequate opportunity to identify and correct the perceived problems.

Implementation of this Greater Yellowstone Ecosystem will interfere with the existing management of Federal lands which have been classified for multiple use. It is our belief that the management of these lands, as perceived by some, would hinder mineral exploration, timber harvest, grazing, recreation, and other multiple uses in areas adjacent to national parks. Such hindrances would certainly have a negative impact on jobs and on the economies and communities adjacent to Yellowstone.

It is our feeling that a far better resolution of the problem is to support the Department of the Interior's proposal which calls for better anticipation, avoidance and resolution of those resource conflicts around national parks through better communication among the Federal agencies. Consultation and advice within these agencies should be carried out in a spirit of mutual cooperation and negotiation. We believe that it is important to identify those threats to the National Park System and we support the goal of enhanced protection of the system's natural and cultural resources.

A recent report from the Under Secretary of the Interior sets forth the essential findings therein, which would aid in better anticipating, avoiding, and resolving potential conflicts, but not necessarily by establishing new systems and programs. We concur with this report that recommends improving and fine-tuning existing Bureau processes.

If I might take this opportunity to make one additional point. All of the Western States contain vast amounts of public lands. My own State of Montana is approximately 30% owned as to the surface by the U.S. Government. Our neighboring State of Wyoming has 48% of its surface owned by the Federal Government. It is my firm belief that we will continue to have serious land management problems until Congress recognizes the importance of the advice and counsel of the respective States in the planning processes as to those lands located within the particular State boundaries. I believe that Congress should provide the twelve largest public land States with a planning responsibility, if not equal to that of the Federal Government, at least of substantial magnitude. Each State would work on all activities that affect the economy of that State on public lands. Perhaps the legislatures of our twelve Western States could be empowered by Congress to establish individual commissions to work with the Federal agencies on public land planning. It is only the individual States that have a real understanding of how important the public lands are within their own boundaries.

I don't believe this to be an unrealistic proposal. Implementation of the Greater Yellowstone Ecosystem would affect an area of approximately the size of Massachusetts and I think it is important that the respective States of Montana, Wyoming, and Idaho all have a hand in the planning process for those lands located within their respective boundaries.

I urge you to look extremely carefully at the concept which you are discussing today, taking into account all of the fears and concerns of the local inhabitants as well as those in the United States who would tend to place those lands within an additional recreational area for their very occasional use. I thank you for giving me the opportunity to appear here today to present our concerns to this Committee.

BEST COPY A

IN REPLY REFER TO

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
NATIONAL PUBLIC LANDS ADVISORY COUNCIL
WASHINGTON, D.C. 20240

July 21, 1984

BUFFER ZONE RESTRICTIONS

Resolution of the National Public Lands Advisory Council

The National Public Lands Advisory Council expresses its deep concern over two bills introduced in the present Congress dealing with buffer zone restrictions on the management of both public and private lands and wildlife. These bills, S. 978 and H.R. 2379, deal with establishment of indefinite boundaries around areas defined in the legislation and would impose restrictions that would seriously impair any attempt to manage the surrounding lands and multiple uses of these lands, including recreation and wildlife.

The Council also expresses its concern over a tendency to administratively establish buffer zones around wilderness areas as well as national parks. The Council feels that only Congress has authority to delegate such powers over the use of public lands.

Therefore, Be It Resolved: That the Council believes that the establishment of buffer zones around wilderness and park areas through administrative directive is improper and should be established only by congressional action, and therefore urges the Secretary of the Interior and the Director of the Bureau of Land Management to oppose the passage of S. 978 and H.R. 2379.

Be It Further Resolved: That the Council endorses the concept of a work group within the Department, to include representatives of the Bureau of Land Management, to study the need for any additional protection of national park values.

TESTIMONY

of

BRADLEY PENN

My name is Bradley Penn and I am the Chairman of the Rocky Mountain Oil and Gas Association (RMOGA) Public Lands Committee. RMOGA is a trade association representing hundreds of individuals, independents, and major oil and gas companies, who account for more than 90% of the oil and gas exploration and production activities in the Rocky Mountain west.

My background includes a degree in Biology and work for the past nine (9) years as an Environmental Specialist in wildlife, vegetation, air quality, and permitting.

I am here today to present RMOGA's testimony on the Yellowstone ecosystem because we believe it is important to establish and explain the industry's perspective on this concept. We believe the concept has vast implications not only for oil and gas resource development but for the multiple use principles under which the nation's public lands are managed.

RMOGA is opposed to the concept of a Yellowstone ecosystem for four primary reasons:

1. There is no empirical evidence to support the need to expand the protection of the ecosystem or the flora and fauna contained therein.

2. More restrictive management of multiple use activities would have a devastating impact on local communities and multiple uses, including oil and gas activities. There is already a substantial body of protective regulations and laws in place designed to protect the Park and its periphery, as well as national forest and other public lands with sensitive environmental values.

3. It has been widely demonstrated in this and other areas that oil and gas activities are compatible with even the most sensitive environments, and these operations have proven not to be harmful to wildlife.

4. Oil and gas potential of lands in this area is extremely high.

Although a proposal for more specific management of the Yellowstone ecosystem has not surfaced, RMOGA's concerns are directed toward the concept of establishing a new classification of lands within which multiple use activities will be further curtailed or eliminated altogether. We have these concerns largely because the need to provide greater protection for the areas outside Yellowstone National Park has not been substantiated, and the impact of such restrictions would be far-reaching.

There is No Need for Greater Protection

Biological data does not support the claims that outside activities are threatening the Park and the ecosystem. The wildlife resources and big game populations are at or near historical high levels in the State of Wyoming and in the region encompassed by the "ecosystem" proposal. Elk and bighorn sheep populations are increasing or stable, even with hunter success being very high. Some game populations have surpassed the target projections of the Wyoming State Game and Fish Department.

Even some threatened species, such as the grizzly bear and bald eagle, are stable in population or increasing in numbers. The grizzly bear population in the Yellowstone ecosystem has been projected by experts to reach the target recovery level within the next 5 to 20 years. Recently the Chief Wildlife

Biologist of the Targhee National Forest, part of the Yellowstone ecosystem, reported the grizzly bear population on that Forest has indeed stabilized and is rising. This is significant from the standpoint of the bear's viability in the Yellowstone ecosystem since bear populations and recovery efforts are studied and gauged on the basis of an entire ecosystem.

Stringent Environmental Protection Already Exists

It is important to recognize that most of the lands in the ecosystem are already withdrawn from multiple use. Yellowstone Park, itself, encompasses approximately 2.2 million acres and the Grand Teton National Park is approximately 300,000 acres. The parks attract over 2 million visitors largely from May to October every year, and supply sanitation, transportation, lodging and recreation needs. Yet it is estimated that only 5% of Yellowstone National Park is now utilized by tourists or contains man-made facilities. This leaves more than 2 million acres of the parks in wilderness.

The proposed ecosystem encompasses 8 million acres of which nearly 80% is already designated wilderness or withdrawn from multiple use activities. The remaining 20% is available for multiple use activities under laws and regulations designed to protect sensitive environments. Not all of this acreage is public lands, however; the percentage of federally-controlled lands which is off-limits to multiple use is even greater. More restrictive management of multiple use activities would have a devastating impact on local communities and the states involved. In the case of oil and gas activities, the remaining 1 million acres of multiple use lands have restrictive stipulations or management guidelines which severely limit exploration activities. The Shoshone National

Forest, which has a total of 2.4 million acres, has only 18% (385,980 acres) available for oil and gas leasing with surface occupancy, but only under the most restrictive stipulations. A similar situation exists in the Bridger-Teton Forest where only about 20% of the Forest is leasable with surface occupancy. The management of activities in the National Forests, which comprise the exterior of the ecosystem, is determined by and developed through the land management planning process. Forest plans set forth the required lease stipulations, mitigating measures, and methods for carrying out oil and gas activities in an environmentally sound manner.

It is important to note that the Wyoming Wilderness Act (Public Law 98-550) was enacted in late 1984, and through extensive negotiations, included a provision specifically prohibiting buffer zones such as the Yellowstone ecosystem proposal. Section 504 of the Act reads:

> "Congress does not intend that the designation of wilderness areas in the State of Wyoming lead to the creation of protective perimeters or buffer zones around each wilderness area. The fact that non-wilderness activities or uses can be seen or heard from within any wilderness area shall not, of itself preclude such activities or uses up to the boundary of the wilderness area."

Multiple use management works! The increased number of big game animals, watershed enhancement projects, and timber management programs have an interrelationship which has improved the portions of the ecosystem where they are allowed as management practices. More protection of these areas would have a similar effect as wilderness designation has had on some of our wild areas.

That is, increased recreational use, with limited management flexibility can lead and has led to the degradation of wilderness areas. This has been exemplified in the Bridger, Fitzpatrick, and Cloud Peak Wilderness Areas in Wyoming. A multiple use management framework allows for more management options and greater flexibility in dealing with wild and sensitive areas.

Oil and Gas Activities are Environmentally Sound

Oil and gas activities have been proven to be compatible with sensitive environments and wildlife in this and other areas in the United States. The example of the Gros Ventre Wilderness Area in the Bridger-Teton National Forest is particularly revealing. This new wilderness area was designated by Congress even though it has experienced oil and gas exploration activity. There were two wells drilled in this wilderness, access roads were built, and well locations cleared. The exploratory wells were dry. Reclaimed and unnoticed, these wells did not detract from the area's wilderness suitability or for incorporation into the wilderness preservation system through the Wyoming Wilderness Act of 1984.

In our interpretation of the boundaries of the Yellowstone ecosystem proposal, there have been over 200 wells drilled. Most have been dry holes and these have been or are being reclaimed. Many examples exist which show that exploration activities have not been injurious to wildlife populations nor to sensitive environments; this is due to industry's adherence to environmental stipulations and mitigating measures already in force and because of concern on the part of industry for preservation of wildlife and the environment. Among these examples are the Marathon North Fork and Gold Reef wells, the Shell Fall Creek well, Williams Exploration Leidy Lake well, Exxon Skull Creek well, and Chevron's

Hoback well. Companies are participating in habitat improvement programs, revegetation, reclamation programs, and new techniques in oil and gas exploration and production which result in minimal environmental disturbance.

Hydrocarbon Potential of the Area is High

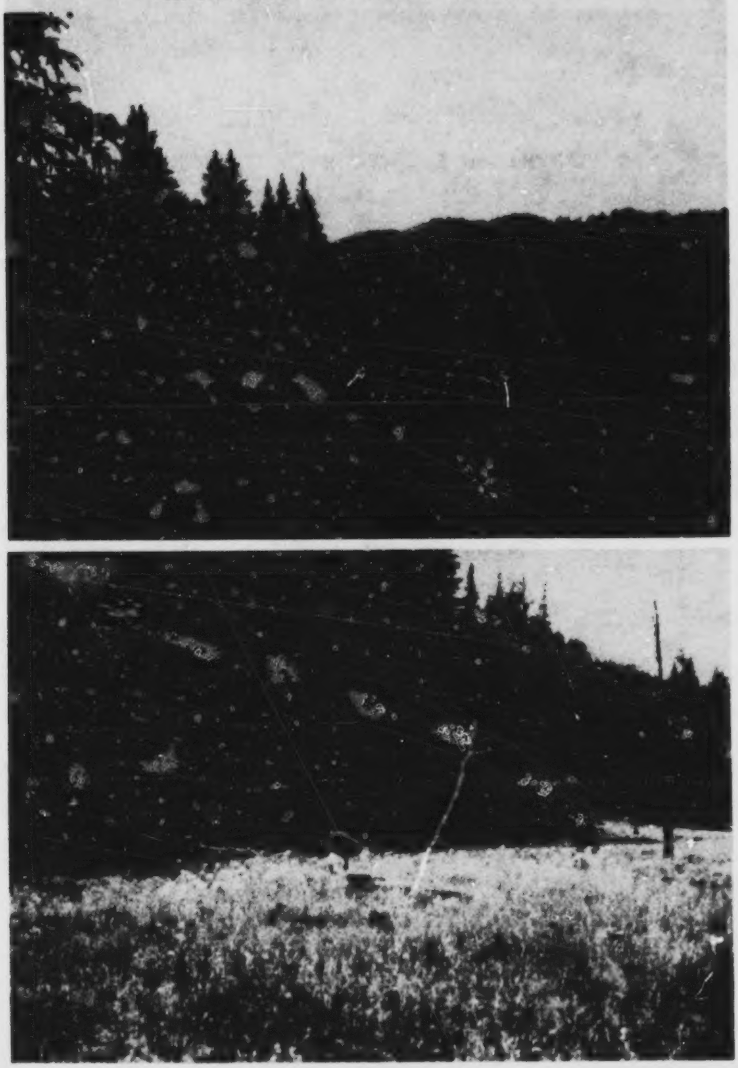
The oil and gas potential of lands now available for multiple use in the Yellowstone ecosystem is high. Seismic information and exploratory drilling operations have revealed, in those limited areas open to oil and gas operations, that the geologic potential is extremely favorable for the discovery of hydrocarbons. United States Geological Survey estimates--and industry activity certainly confirms--the existence of substantial hydrocarbon potential, even though discoveries to date have been few.

Conclusion

In conclusion, one factor in the current discussion about protection of the ecosystem that has not been mentioned is that man is part of the ecosystem too. There is no reason why man cannot continue to coexist with sensitive environments such as this. The natural resource potential of the Yellowstone ecosystem is as vast as is the land area. Man is a user of these resources and the nation is highly dependent on production of our natural resources. There is ample room for both preservation of the area's natural values and for controlled, environmentally-sound multiple use activities, such as oil and gas exploration and development.

The existing management situation, in which more than 80% of the Yellowstone ecosystem area is withdrawn for permanent preservation as wilderness or national parks (and in which further wilderness study is ongoing), already provides superlative protection for the Yellowstone National Park and surrounding areas. What few remaining multiple use lands there are in this area should be managed to provide some opportunity for necessary use by people, to benefit the localities, the states, and the nation.

WELL LOCATIONS IN THE GROS VENTRE WILDERNESS



STATEMENT ON BEHALF OF THE

AMERICAN PETROLEUM INSTITUTE

BY

DR. DARWIN SPEARING
District Exploration Manager
Marathon Oil Company

BEFORE THE

SUBCOMMITTEE ON PUBLIC LANDS
SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
U.S. HOUSE OF REPRESENTATIVES

OCTOBER 24, 1985
WASHINGTON, D. C.

Mr. Chairman and members of the Subcommittees, my name is Dr. Darwin Spearing, District Exploration Manager for Marathon Oil Company in Cody, Wyoming. I have an undergraduate degree in biology, a masters degree in plant ecology and a doctorate in geology. My professional experience includes 17 years of work in geological research in petroleum exploration.

My testimony is offered on behalf of the American Petroleum Institute, an industry trade association composed of 230 companies of all sizes and 6,000 individuals involved in all phases of the petroleum industry. API is pleased to participate in this oversight hearing on management issues within the Greater Yellowstone Ecosystem. Many of our members conduct oil and gas activities on those federal lands included in the six-million acre ecosystem. We believe these activities take place in a manner compatible with other values and uses. In sensitive areas, these activities can be and are designed to address specific environmental concerns.

Our members strictly adhere to the requirements of the numerous statutes protecting wildlife, endangered species, air and water quality, and the environment in general, when operating on federal, state or private lands. Moreover, federal oil and gas exploration, drilling and development activities are subject to consultation with state and federal authorities, including wildlife agencies. Various stipulations are worked out to assure that any perceived conflicts are avoided.

Land managing agencies, through their planning processes, identify potential conflicts among the various values and uses of areas or regions under their jurisdiction. In addition, the Department of the Interior -- through the Under Secretary's Park Protection Working Group -- has completed recommendations for improving its internal mechanisms so as to anticipate, avoid and resolve any conflicts. This approach provides a logical and flexible means for effective and efficient land management. This is particularly true in areas where environmental conditions and scientific data change rapidly.

The Yellowstone Ecosystem is comprised of seven national forests, including seven wilderness areas and two national parks. This means that it accommodates a diversity of uses --- oil and gas exploration and production, grazing, timber harvesting, recreation and wildlife habitat, including that of the grizzly bear. By law, the concept of multiple-use management applies to federal lands outside of the boundaries of the wilderness areas and national parks and is a logical extension of using those lands for the greatest public benefit.

Moreover, it is clearly demonstrated that oil and gas operations are compatible with sensitive environments, such as those within the Greater Yellowstone Ecosystem. Let me cite a case in point.

Marathon has recently conducted exploration activities on the periphery of that Ecosystem. The North Fork well (Federal

#34-13) was an exploratory wildcat located approximately 28 miles west of Cody, Wyoming, and 19 miles east of Yellowstone Park. The Absaroka Wilderness is 7 miles to the north and the Washakie Wilderness is 2 1/2 miles to the south. Most recently, the government lands on which this well was drilled have been designated as available for multiple use by the Wyoming Wilderness Act.

This exploration project incorporated many environmental safeguards and protective measures to mitigate any potentially damaging impact. To begin with, the Forest Service looked at these multiple-use portions of the national forest and recommended leasing and protective stipulations to the Bureau of Land Management (BLM). Some of these lease stipulations are for limited surface use. For example, during the period from December 1st to March 21st, use was limited in the big game winter range; from April 15th to June 20th, activities were limited in the big game birthing area; and from June 1st to September 7th, restrictions applied in areas open to recreational use.

Thus, these stipulations prohibited surface occupancy in the specified time frames. In addition to the lease stipulations, the environmental documentation added requirements for resource protection. Marathon incorporated design and operational measures, which further enhanced the mitigating measures of this exploratory well. These included plans for the following:

- spill contingency,
- erosion control,
- traffic and transportation,
- hydrogen sulfide contingency,
- blowout prevention,
- site location,
- casing, and
- reclamation and revegetation.

Regarding reclamation and revegetation -- which is completed in the initial phase -- the Forest Service Research Station of Ogden, Utah, was contracted to design and implement a program.

The environmental documentation looked at many of the physical aspects of the environment to limit or avoid any impacts in this part of the Yellowstone Ecosystem. The documentation looked at the following:

- geology,
- soils and vegetation,
- water quality,
- wetlands and flood plains,
- air quality,
- wildlife and fish,
- threatened and endangered species,
- visual resources,

- outdoor recreation,
- wilderness,
- cultural resources,
- land and special uses,
- transportation and
- socioeconomic impacts.

The environmental documentation and permitting of this project included:

- a regional leasing environmental assessment,
- two draft environmental impact statements (EIS),
- a final environmental impact statement,
- two 60-day public comment periods,
- two public hearings,
- an administrative appeal and
- a judicial appeal.

As a consequence of the studies undertaken, the impacts outlined in the documentation were judged to range from insignificant to low. The perceived threats, voiced through this documentation process, were the standard alarms. They were proven and documented to be just that, perceived threats -- not actual threats. After the wildcat exploratory well was drilled, an award was given to Marathon by the Forest Service and BLM in early October of this year which reads:

> "[Presented] In genuine appreciation of the outstanding cooperation given both the Forest Service and Bureau of Land Management and for care given the surface resources in planning for and drilling the North Fork well."

Another specific example of work toward mitigating potentially adverse impacts is the study done on the gizzly bear for this project. The Forest Service, BLM, Wyoming Game and Fish Department, and the U.S. Fish and Wildlife Service conducted cooperative studies to determine the impacts of the exploratory well on this threatened species. The conclusion documented in the Final EIS by the U.S. Fish and Wildlife Service was that there would be no significant impact on the continued existence of the gizzly bear because of this project. There are, currently, regulations and laws which ensure that this protection of the environment continues for all proposed projects.

Among these laws and regulations are the following:

- Grizzly Bear Management Guidelines,
- Forest Plans,
- BLM Plans,
- Clean Air Act,
- Clean Water Act,
- National Environmental Policy Act,

- Endangered Species Act,
- Cultural Resources Clearance,
- Wilderness Act and
- State and Local Laws and Regulations.

In conclusion, Marathon's activities at their North Fork well show that oil and gas activities are compatible with sensitive environments. Such activities need not and should not be excluded from multiple-use public lands. Moreover, there are numerous examples of oil and gas activity compatibility which have been exhibited within the Yellowstone Ecosystem and throughout the United States. We believe that current statutes provide sufficient flexibility to adapt to specific sensitive environments. Thus, there is no need to change the system. The internal communication and documentation process already exists for management agencies to resolve conflicts and present solutions for multiple-use activities and is clearly adequate to meet the requirements of environmental protection. It would not be in the national interest to add to the burden of exploration by unnecessarily increasing the restrictions and regulations already in place. Rather the timely, well-planned development of energy resources is of paramount importance to the individual states and to the nation as a whole.

Mr. Chairman, thank you for the opportunity to present this testimony. I will be happy to answer any questions.

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INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

AND

AMERICAN ASSOCIATION OF PETROLEUM LANDMEN
ARKANSAS ROYALTY MEMBERSHIP
CALIFORNIA INDEPENDENT PRODUCERS ASSOCIATION
COASTAL OIL AND GAS ASSOCIATION
EASTERN KANSAS OIL AND GAS ASSOCIATION, INC.
EAST TEXAS PRODUCERS AND ROYALTY OWNERS ASSOCIATION
ENERGY CONSUMERS AND PRODUCERS ASSOCIATION
GEORGIA OIL AND GAS ASSOCIATION
ILLINOIS OIL AND GAS ASSOCIATION
INDEPENDENT OIL AND GAS ASSOCIATION OF NEW YORK
INDEPENDENT OIL AND GAS ASSOCIATION OF WEST VIRGINIA
INDEPENDENT OIL PRODUCERS TRI-STATE, INC.
INDEPENDENT PETROLEUM ASSOCIATION OF MOUNTAIN STATES
INDEPENDENT PETROLEUM ASSOCIATION OF NEW MEXICO
INDIANA OIL AND GAS ASSOCIATION
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KENTUCKY OIL AND GAS ASSOCIATION
LIAISON COMMITTEE OF COOPERATING OIL AND GAS ASSOCIATIONS
LOUISIANA LANDOWNERS ASSOCIATION INC.
LOUISIANA ASSOCIATION OF INDEPENDENT PRODUCERS AND ROYALTY OWNERS
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PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION
PENNSYLVANIA OIL AND GAS ASSOCIATION
PERMIAN BASIN PETROLEUM ASSOCIATION
ROCKY MOUNTAIN OIL AND GAS ASSOCIATION
ROYALTY OWNERS AND INDEPENDENT OIL AND GAS PRODUCERS ASSOCIATION OF ARKANSAS
TENNESSEE OIL AND GAS ASSOCIATION
TEXAS INDEPENDENT PRODUCERS AND ROYALTY OWNERS ASSOCIATION
VIRGINIA OIL AND GAS ASSOCIATION
WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION

by

DOUGLAS FRANCISCO

before the

JOINT HEARING OF THE

HOUSE INTERIOR COMMITTEE'S

SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION

AND THE SUBCOMMITTEE ON PUBLIC LANDS

October 24, 1985

Mr. Chairman. My name is Douglas Francisco. I am employed by the Independent Petroleum Association of America. With the association I serve as the staff secretary of the public lands committee. Today, I am appearing not only for IPAA but also the Independent Petroleum Association of the Mountain States which is headquartered in Denver, Colorado.

For the record the Independent Petroleum Association of America is a national association of roughly 6,500 independent, domestic explorer-producers of crude oil and natural gas. Virtually all of the oil and gas exploration and production activity of the IPAA membership takes place within the "lower 48" states of the United States. Independents drill 80 percent of all wells and 90 percent of all exploratory wells directed at finding new oil and natural gas. Independents make 80 percent of the significant oil and gas discoveries, according to the American Association of Petroleum Geologists in their latest report covering the years 1969-1978. Furthermore, the independent oil and gas people produce about one-third of the total output of crude oil and natural gas in the United States.

The Independent Petroleum Association of the Mountain States is a regional association located in the Rocky Mountain West. IPAMS includes 11 western states and has approximately 1700 members.

Mr. Chairman. Both IPAA and IPAMS appreciate having the opportunity to comment on the issues surrounding the Greater Yellowstone Ecosystem as well as the concept of ecosystem management in general. We feel that a discussion of current industry practice in terms of exploration and production in sensitive areas is helpful to everyone. We feel that our industry has a good record in our operations in environmentally sensitive areas and the opportunity to talk about that record is welcome. Similarly, our views concerning our country's national parks is not fully understood. This forum gives us an opportunity to reiterate those views. Least there be any doubt let me state that we strongly support the protection and preservation of our nation's national parks recognizing that they are a representation of our national heritage.

That having been said, it is also important to point out that our associations and in turn, our members, have a vision of continued greatness for our country. We therefore must all be cognizant that the resource development in the western states is the lifeblood of not only the states themselves, but for the nation and millions of people.

With particular reference to the area under discussion today many of our members in the western states explore for (and hopefully produce) oil and gas on lands included in this ecosystem. As with all oil and gas operations, from the exploration through the development phase, great time and care is taken to ensure that sensitive environmental situations are recognized and protected.

In addition to common industry practice, there is a whole host of Federal law and the accompanying regulations that provide for that sensitivity to the environment - be it wildlife protection, vegetation reclamation, watershed protection or air quality. Such environmental requirements and in turn the methods employed to respond to those requirements are very specific and are ultimately reached only after careful consultation with both federal and state officials who have an expertise in these matters. Through this consultation process numerous stipulations, as to the conduct on a given lease, are developed to ensure that conflicts involving any of these values are avoided. Some activities are specifically banned on a lease during certain times of the year. Certain parts of a lease are off limits to any surface access at all as a recognition of such things as wildlife migration, wildlife mating, erosion control, and watershed protection. As I mentioned earlier these safeguards are observed from the earliest phases of exploration through the production phase or in the unfortunate event that no oil or gas is found the complete reclamation and revegetation phase.

It needs to be kept in mind that the areas I am discussing involving oil and gas exploration and production are not in the boundaries of any national park or wilderness area. They are areas that are subject to the concept of multiple use with numerous environmental safeguards. We are not suggesting by any stretch of the imagination that development activities be allowed to take place in parks or designated wilderness areas. We do, however, strongly object to the de facto expansion of the boundaries of the parks and wilderness areas by applying standards not consistent with multiple use for areas legally designated for multiple use. It seems obvious but must be stated nonetheless, that boundaries are created for a reason. We strongly object to any plan or program be it through the ecosystem concept or some other buffer zone scheme that by practice would extend internal park protection beyond park boundaries.

We do, however, recognize the need to work with those whose job it is to protect values within the parks. To this end we recognize the value of the interagency task force that provides a communications tool for land managers overseeing all activities in areas surrounding parks. We support the Department of the Interior's efforts to improve communication among park personnel, BLM and Forest System land managers and potential users.

We do not feel, however, that that communication process should be used as a tool to stifle legitimate resource development. Our nation is dangerously dependent on foreign sources for nearly a third of our petroleum requirements. We should be looking for ways to improve, not discourage, opportunities to find and produce oil and gas. Estimates are that more than half of the petroleum that will need to be produced domestically by the year 2000 has yet to be found. Much of that oil and gas, it is believed, largely underlies the lands in the Rocky Mountain states.

In conclusion, Mr. Chairman, we support the need to protect the parks within their boundaries and we encourage the improved communication of all parties involved in activities in the vicinity of parks. We believe that adequate environmental safeguards governing oil and gas development are already in place and in practice protecting wildlife and other values. We feel strongly that no new authority or legislation is needed to continue to meet the environmental needs of this area.

Thank you Mr. Chairman.

BEST [illegible] ABLE

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STATEMENT OF EDWARD H. MADEJ

CONSULTANT, MONTANA CHAPTER, SIERRA CLUB

ON ENVIRONMENTAL PROBLEMS POSED BY OIL AND GAS LEASING

IN THE GREATER YELLOWSTONE ECOSYSTEM

BEFORE THE HOUSE INTERIOR SUBCOMMITTEES ON PUBLIC LANDS

AND NATIONAL PARKS AND RECREATION

HONORABLE JOHN SEIBERLING AND BRUCE VENTO, CHAIRMEN

October 24, 1985

"When we try to pick out anything by itself, we find it hitched to everything else in the universse." *John Muir*
National Headquarters: 530 Bush Street, San Francisco, California 94108 (415) 981-8634

Chairmen Seiberling and Vento, Members of the Subcommittees,

Thank you for the opportunity to present the views of the Sierra Club concerning the problems associated with oil and gas leasing, exploration, and development on the six contiguous National Forests surrounding Yellowstone National Park.

My name is Ed Madej, and I am a geographer and writer in Helena, Montana. I have been involved with public lands issues with the Sierra Club in the Northern Rockies for seven years, and have worked on several books concerning the area, including the Greater Yellowstone and Montana's Mountain Ranges.

For the last several months, I have been working on the Greater Yellowstone Leasing Project. This project, sponsored by the Sierra Club, is designed to examine the oil and gas leasing process on public lands surrounding Yellowstone and Grand Teton National Parks. Today, I would like to present some of our preliminary findings, as they relate to oil and gas leasing on the six national forests which lie adjacent to the parks.

5.8 million acres of national forest land (or 59% of all the forest land in the Greater Yellowstone Ecosystem) is open for mineral leasing for oil and gas. In fact, approximately 4.5 million acres of the national forests in the ecosystem are already under lease. I can only say "approximately", because, as we have discovered, it is very difficult to find out from the Forest Service precisely what lands are leased.

Here are some of the facts concerning the leasing situation which we have been able to uncover so far in our investigation. On the Bridger-Teton Forest alone there are now over 1600 oil and gas leases covering over 2,000,000 acres. Approximately 75% of the entire land area of the Targhee National Forest is leased or under lease application. 45,000 acres of the recently created Gros Ventre Wilderness is currently under lease. In the area of the Gallatin National Forest within the Greater Yellowstone Ecosystem, as much as 500,000 acres may be under lease (Forest Service documents are unclear on this point), including 25,000 acres of essential grizzly bear habitat immediately adjacent to the Yellowstone Park boundary.

With so much public land open to leasing and in fact already leased, oil and gas development has the potential of being the single greatest environmental impact to the Greater Yellowstone Ecosystem. In some areas, this impact is already being realized.

During the two years prior to 1984, when *Montana Magazine* published *Greater Yellowstone*, writer Rick Reese cited over 4,000 miles of seismic exploration lines on the Bridger-Teton alone. Such seismic prospecting often includes the detonation of thousands of explosive charges in the backcountry and the consequent disturbance of important wildlife habitat.

There have been nearly 100 drilling permits granted on the forests here during the last ten years, with the bulk of them being located on the Bridger-Teton and Shoshone National Forests. Drillsites have already been established in sensitive backcountry areas such as the Mt. Leidy Highlands and the Palisades.

An area of such significance as the Greater Yellowstone should be a showcase of enlightened land management. With oil and gas leasing, this is definitely not the case. Although there has not yet been a major commercial find within the Greater Yellowstone area, should such a find occur, there is nothing in the current plannning to prevent the development of a massive production infrastructure similar to that at Riley Ridge, right next to the boundary of Yellowstone Park itself.

MILLIONS OF ACRES LEASED WITH NO ENVIRONMENTAL REVIEW

At the source of the current chaos in planning for oil and gas development on the national forests surrounding Yellowstone is an attitude of Forest Service officials that the act of lease issuance is merely a transfer of paper, which has no environmental impact. Environmental impacts, they say, will be dealt with at a later date, when development plans are proposed by industry. Unfortunately, under the controlling Interior Department policy, the issuance of a lease commits a tract of land to development, so even the best-intentioned land managers may later find that the option of avoiding irreparable damage to a sensitive area has been foreclosed.

How little consideration has been given at the leasing stage to the potential environmental effects of oil and gas development can be shown by a few examples:

- In 1972 and 1973, on the basis of two environmental assessments, one 9 pages long and the other 16 pages long, the Forest Service leased two million acres of the Bridger-Teton National Forest;

- Also in 1972, a 12 page environmental assessment was the sole decision document for leasing more than a million acres of land on the Targhee National Forest;

- In the most amazing example, during 1979, a 15 page long environmental assessment was used as the basis for leasing over 17.4 million acres of the entire Rocky Mountain Region of the National Forest System. This EA covered 900,000 acres of the Shoshone National Forest adjacent to Yellowstone's eastern edge.

- By 1982, environmental assessments had gotten longer, but were still far from adequate. During 1982, a 50 page EA was used to lease 500,000 acres of the Gallatin National Forest. Earlier this year, the issuance of leases under this EA was found by a federal court to be in violation of NEPA and the Endangered Species Act. It is the Sierra Club's view that most, if not all, of the other environmental assessments used as a basis for oil and gas leasing in the Greater Yellowstone Ecosystem would be found, under judicial review, to be similarly inadequate.

Nearly every national forest evaluates the leasing process differently, and inadequately. None have done an environmental impact statement on leasing.

SPECIFIC PROBLEMS WITH THE LEASING PROCESS IN THE YELLOWSTONE SYSTEM

Conservationists have several problems with the leasing process that are found across the board among the six national forests in the Yellowstone area.

1. The Forest Service has not developed adequate data to allow the evaluation of oil and gas leasing and development decisions, either by its own officials or by the public. It is very difficult to find the simplest of information concerning what forest lands are leased and what lands are open to leasing. Only one forest plan, the Targhee Plan, has a map showing the extent of leasing on the forest. Most forests do not even have a master map at Forest Service offices showing the extent of leasing on the forest. Lease records are kept on microfiche according to the township and range. As a result, neither the public nor the Forest Service's own decision makers have access to the total leasing picture for a particular forest.

Some forests, in fact, cannot tell how much of their forest land is even leased at a given time. The Gallatin Forest Plan gives two different figures on the amount of land leased; somewhere between 200,000 and 500,000 acres. The Beaverhead Forest plan states that approximately 1.6 million acres of forest is leased, but does not give any information on the location of the leases.

2. Even when the Forest Service does have pertinent information which would assist [illegible] public in understanding and responding to leasing plans, it [illegible]en neglects to make the information public. Critical leasing decisions are made without the opportunity for public comment. As an example, repeated written requests to be informed of leasing activity and permit decisions on the Bridger-Teton National Forest have been ignored. Regular administrative appeal procedures have been abused by agency signing of key decision documents weeks before the documents were released to the public.

3. As a result of the absence of meaningful data and the lack of public involvement in leasing decisions, many sensitive areas which should legitimately be protected from oil and gas development have instead been opened for leasing. On the Bridger-Teton, extensive areas of the Mt. Leidy Highlands on the eastern boundary of Grand Teton National Park, as well as the Gros Ventre Wilderness and the Palisades Further Planning Area, have been leased. Exploratory drilling in both the Palisades and the Mt. Leidy areas has been followed by the logging of formerly roadless drainages, compounding the already significant impact of the exploration activities themselves.

4. Despite the statutory discretion of the Secretary of the Interior not to lease lands where such leasing would not serve the public interest, field practice in both the BLM and the Forest Service reflects a customary policy to lease any lands for which application has been received and which are not withdrawn from mineral entry by law or regulation. Current BLM guidance (BLM Instruction Memorandum 84-254, Feb. 2, 1984), declares that, under the process of leasing with stipulations, rejecting lease offers "should not be possible." Under this practice, even prime grizzly bear habitat is open for leasing and development in the Greater Yellowstone area.

5. Once an improper lease is issued, whether through inadequate consideration of non-mineral values or by agency error, its threat to the environment is long-lasting and extremely difficult to reverse. Current Forest Service and Department of Interior policies make it virtually impossible to deny development rights to a qualified lessee with a lease in hand. Even when protective stipulations are present on the original lease, the agencies are extremely reluctant to deny permission to drill. In fact, in a 1980 Solicitor's Opinion from the Interior Department's Denver Region, the Department stated its judgement that:

> No precedent exists for denial of an application for a permit to drill under an onshore oil and gas lease based on environmental protection considerations... such denial would have Constitutional implications concerning the taking of property rights and the payment of just compensation provisions of the Fifth Amendment.

The Forest Service takes the position that a lease issued through error cannot be corrected without the consent of the lessee.

A good example of the problem of correcting bad leasing decisions occurred in the Gros Ventre Wilderness, where leases were issued in 1969 and the early 1970's, when the area was still in wilderness study status, with no public awareness and little agency thought of the consequences. Over fiteen years after the pivotal lease was issued, the State of Wyoming, the Teton County Commission, the Town of Jackson, the Sierra Club, the Wilderness Society, the Jackson Hole Alliance, and numerous other citizens and groups are continuing to fight attempts to drill in this sensitive area. Even though their position was recently vindicated in court, the current leaseholder, Texaco, continues to assert its rights.

6. Thus, under the current planning and leasing system, there is literally no way for the Forest Service to foresee or to prevent the severe environmental impacts which would almost surely follow any major full-field oil and gas development in the Greater Yellowstone area. The development of a major oil and gas find involves the construction of extensive roads, pipelines, and utility lines, and the emplacement of separators, generators and storage tanks. In a 1981 Environmental Impact Statement on the proposed leasing of the Washakie Wilderness Area, which touches the Yellowstone Park Boundary on the East, the Forest Service listed the following "unavoidable adverse impacts":

> "...reduced winter wildlife range, declining populations of elk, moose, bighorn sheep (possibly below viable populations), large predators, and reduced wildlife habitat and the displacement of many wildlife species." (Quoted from Greater Yellowstone, Rick Reese, 1984, p. 68).

This chaotic and ineffective planning environment has led to a situation in which many of the most sensitive treasures of the Greater Yellowstone Ecosystem are threatened by rampant and uncontrollable oil and gas development. Here are a few examples:

On the Shoshone National Forest, two of the eastern entrance corridors to Yellowstone National Park have been leased, along with important wildlife habitat along the South fork of Shoshone River.

The narrow valley between the North Absaroka Wilderness on one side and the Washakie Wilderness on the other, which includes the eastern entrance road of Yellowstone west of Cody, Wyoming, has now been leased for oil and gas development. Portions of the extremely scenic Beartooth Highway corridor have been leased as well. Oil and gas development in these areas is sure to have serious impacts on the tourist's experience using these entrances as well as the natural environment.

On the Custer National Forest, the high plateaus on the fringes of the Absaroka-Beartooth Wilderness are under lease. The Custer Forest Plan states that wildcat drilling on the Red Lodge and Line Creek Plateaus will very likely occur within the next ten years. The plan also states that the Absaroka-Beartooth Wilderness will reach its carrying capacity for recreational use within ten years. The Absaroka-Beartooth Wilderness is the fourth most popular wilderness area in the country, and conservationists have proposed that the roadless Line Creek Plateau be protected as wilderness. If oil and gas development should occur here, recreation options for the crowded Absaroka-Beartooth Wilderness will be severely limited.

The Gallatin National Forest continues to do a poor job on leasing, even after being told by a federal court that their environmental assessment on leasing is in violation of NEPA. In the current forest plan, the Gallatin Forest proposes opening 82,000 acres of the Hyalite-Porcupine Wilderness Study Area in the Gallatin Range for oil and gas leasing. This portion of the forest lies directly adjacent to Yellowstone National Park in prime grizzly habitat. In 1982, the U.S. Fish and Wildlife Service suggested that the Gallatin take more positive steps toward protectng endangered species, such as not leasing critical grizzly bear habitat. The Gallatin Forest has chosen to ignore this request, and the the Gallatin Range will be leased, if Congress releases it from its wilderness study status.

CONCLUSION

The conclusion we have drawn from the data available to us so far is really quite simple, though my colleague Phil Hocker will explore it in more detail. It is, simply, that without drastic improvements in the environmental review and decision-making processes which precede oil and gas leasing, critical areas such as the Greater Yellowstone Ecosystem will continue to be threatened by unacceptable environmental impacts from oil and gas development.

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STATEMENT OF PHILIP M. HOCKER

NATIONAL TREASURER, SIERRA CLUB

BEFORE THE JOINT OVERSIGHT HEARING

OF THE SUBCOMMITTEES ON PUBLIC LANDS AND

NATIONAL PARKS AND RECREATION

HONORABLE JOHN SEIBERLING AND BRUCE VENTO, CHAIRMEN

OCTOBER 24, 1985

"When we try to pick out anything by itself, we find it hitched to everything else in the universe." *John Muir*
National Headquarters: 530 Bush Street, San Francisco, California 94108 (415) 981-8634

Chairman Seiberling, Chairman Vento, Members of the Subcommittees:

Thank you for the opportunity to testify today on the management issues relating to the "Greater Yellowstone Ecosystem." I am Philip M. Hocker; I am a professional Architect, practicing in Jackson Hole, Wyoming, where I have lived since 1972. I have been actively involved in public resource-management issues in the Greater Yellowstone area for many years, and have participated in many Federal administrative proceedings, appeals, and lawsuits relating to management issues. I am a member of the Board of Directors of the Sierra Club, and am its Treasurer.

Other speakers at this Hearing have addressed the unique values of the Greater Yellowstone Ecosystem and the threats which face it. I wish to concentrate on one of the gravest of those threats: uncontrolled mineral exploitation. I will give some examples from my personal experience of the present and future extent of this threat, and recommend some solutions which I believe the Congress must urgently consider:

The Greater Yellowstone Ecosystem stands today, largely intact and undisturbed, thanks to two types of forces: citizen conservationist concern, and economics. The remoteness of the Yellowstone area and its difficult topography had as much to do with its protection as wise protection by conservationists. No major deposits of valuable ores have been developed around the Park. But this de facto protection is crumbling, as new high values encourage more exploration. It must be replaced by positive steps.

In the past decade, the pace of exploration for energy resources in the Yellowstone region has increased tremendously. A major attempt was made in 1978 to lease the Island Park area, immediately adjacent to the west border of Yellowstone National Park itself, for geothermal exploration and development. Most of the known geyser areas of the world have been destroyed by man's development attempts, yet here the Forest Service was on the brink of approving lease issuance barely ten miles from Old Faithful itself. At the last minute, public outcry halted this desecration, but even today it is a legal possibility.

Meanwhile, oil and gas leasing and exploration take place around and within the Greater Yellowstone Ecosystem. Only good fortune is protecting the Yellowstone Ecosystem from the potential impacts of intensive oil or gas development in extremely sensitive areas, however. In reference to the controversial North Fork Well on the Shoshone National Forest a few miles east of the Yellowstone boundary, a state BLM official told me two weeks ago: "We all breathed a sigh of relief when that was a dry hole." If it had not been, a major gas field might have forced intensive development in key grizzly bear habitat of the ecosystem.

Many leases have been issued, and many more are pending issuance or reissuance. No coordinated plan exists to direct lease-issuance decisions to be consistent with Ecosystem needs. In fact, lease-issuance is the most uncontrolled Federal resource-management action in the Yellowstone region.

Federal agencies are subject to legislative direction in their management of timber resources, of air and water quality, of endangered species. While we have problems with the effectiveness of acts such as the National Forest Management Act in regulating timber plans, the legislation is in place. But in the Yellowstone ecosystem oil and gas leasing is handled on an ad hoc basis, inconsistently, and with a chain of authority calculated to be insensitive to the needs of wild lands and wildlife.

Beyond the National Parks, Yellowstone and Grand Teton, the more sensitive lands of the Ecosystem are managed by the U.S. Forest Service. However, the Forest Service has only incidental involvement in oil and gas leasing decisions. The Forest Service feels unsure of its role - and the Bureau of Land Management and the Interior Board of Land Appeals have encouraged that insecurity in order to maintain their own sway. Yet the BLM is ignorant of the needs for protecting surface resources - critical habitats for wildlife, scenic vistas, migration corridors, recreation sites - within the Yellowstone region. Less than a third of one per cent of the surface area of the Yellowstone Ecosystem is under BLM jurisdiction.

When a Federal oil and gas lease is applied for, or is processed for commitment in the simultaneous lottery, the following system is normal: When the lease lies on Forest Service lands, the state office of the Bureau of Land Management forwards the paperwork to the Regional Office of the Forest Service. It is then shuffled to the Supervisor's Office of the affected National Forest, which sends it on to the germane District Ranger. He then reviews the lease, recommends conditions or "stipulations" which should apply, and the lease and recommendations are routed back along the path to the BLM. The actual stipulation recommendations are made at a low management level, on a frequently inconsistent basis, with no public involvement and little coordination with other agencies.

Yet these leases, when issued, become binding contracts on the Federal government, conveying rights to the lessees. If those rights conflict with the needs of Grizzly Bear recovery, or the protection of critical areas such as Little Granite Creek, the Bear or the Wilderness must be sacrificed, or the lessee must be compensated for not raping the Ecosystem with his new-found rights.

When a lease falls on the boundary between National Forests, it is a matter of chance which Forest is asked to review it. If the lease policies of the Forests differ, it is a matter of chance which policies apply. For example, a lease in the critical Situation I grizzly bear habitat around Togwotee Pass, straddling the Continental Divide, has a 50/50 chance of being referred to Forest Service Region 2 (Denver) or 4 (Ogden). A lease sent to Region 2 will be reviewed by the Shoshone National Forest; since the Shoshone has a standing policy of recommending against lease issuance in Situation I bear habitat, the lease will be sent back to BLM with a "do-not-issue" recommendation. But if it goes to Region 4, and on to the Bridger-Teton Forests, until recently it would be issued, with an ineffectual stipulation attached for the Grizzly Bear's benefit.

While the Forest Service is consulted, it does not have final authority. The Interior Department has refused to delegate real power to another Department. The IBLA has held in many cases that the Forest Service may only recommend, not decide. So BLM must review the Forest Service's recommendations, and then make its own final, independent, decision. See for example the case "Stanley M. Edwards," IBLA 75-181, decided February 4, 1976. In this contest, the IBLA ruled that:

> Where the Bureau of Land Management rejects an oil and gas lease offer for public lands within a national forest solely on the objection of the Forest Service and where Bureau officials did not make an independent determination whether leasing the lands is or is not in the public interest, the rejection is not a proper exercise of discretion and the case will be remanded to the Bureau for further consideration.

Further, the critical Federal policies controlling lease issuance and administration are made by the BLM, with no input from the Forest Service. Where these policies affect Forest Service options, their impact is usually not considered. It has been the policy of the Reagan Administration to ensure issuance of leases on virtually all legally available lands, and this policy has been carried out through BLM directives. Forest Service management plays no part in formulating these directives.

SUMMARY: LEASE MANAGEMENT IN THE ECOSYSTEM

Few of the sensitive lands in the Greater Yellowstone Ecosystem are under Bureau of Land Management jurisdiction. The BLM has no staff experience with the needs and sensitivities of the Ecosystem. Yet it, though ignorant, has ultimate authority over leasing. The Forest Service is responsible for surface management of the perimeter areas around the National Parks... yet it can only recommend, not decide, lease issuance. The Park Service, stewards of the core of the Ecosystem, is not even consulted on lease decisions which surround it.

The Greater Yellowstone region should be a showcase of our finest and most sensitive policies and methods of integrated management. Instead, it is a Tussaud's Wax Museum of ill-chosen elements in bizarre assembly.

RECOMMENDED STEPS:

The Sierra Club believes that Congress must act promptly to protect the Greater Yellowstone Ecosystem from the threat that our luck will run out, and that a significant energy-development impact will damage the priceless heritage of Yellowstone for transient profits and little lasting national benefit.

We believe that reform of the environmental protections of the onshore leasing system is urgently needed. This reform should be an integral part of the overhaul of the simultaneous lottery being considered by the Congress. I gave details of our recommendations on May 7th before Congressman Rahall's Subcommittee on Mines and Mining; I also explained why we believe that this overhaul will be of great benefit to the minerals industry, by giving it a more stable and reliable framework within which to operate.

In sum:

-Minerals planning must be integrated with other resource planning; on national forests, NFMA plans should include specific mapping of intended policy to issue leases, to issue only with tight controls, or to deny issuance; these decisions should be made together with other Forest planning decisions, not in isolation.

-In order to make this planning meaningful, the Forest Service must be given statutory authority over oil/gas lease review and issuance decisions on the national forests, in the Yellowstone Ecosystem and elsewhere.

-Meaningful public involvement opportunities must be provided at leasing and seismic or drilling permitting stages, before final decisions are made.

-In the Greater Yellowstone Ecosystem, the National Park Service must be involved directly in developing lease issuance plans and in management of sensitive activities on extant leases.

Thank you for the opportunity to appear today to present the Sierra Club's views on the management of the Greater Yellowstone Ecosystem. We believe that uncontrolled mineral development poses a grave threat to the future of the Ecosystem. We urge the Subcommittees and the Congress to rise to control this threat before it is too late.

TESTIMONY ON GREATER YELLOWSTONE ECOSYSTEM HEARINGS

Dan S. Budd

Mr. Chairmen and Members of the Subcommittees:

My name is Dan Budd. I am a state Representative for Sublette County to the Wyoming State Legislature. I am also a lifelong resident and rancher in Wyoming

National forests have historically supplied multiple use management which is not available on private lands or other federal agencies because of their management policies. Most of the commodity uses and local recreation use in my area represented by the ecosystem occur on the Bridger-Teton National Forest in northwest Wyoming.

I believe the Forest Service has been managing the area in a coordinated way with neighboring forests and two national parks in the best interest of the American public, and there is no need to establish further legislation to impose additional coordination and restrictions on commodity uses.

-The livestock industries of Sublette and Teton Counties in Wyoming are very dependent on the national forest for forage during the summer months to support their operations. Ecosystem sponsored programs such as the reintroduction of the gray wolf onto national parks is of great concern among livestock producers in these areas. Restrictions to protect this predator could cause severe damage to the local livestock industry not only on public lands but also on private lands.

-Local lumber mills and family-owned small operations are almost entirely dependent upon the national forests as a source of timber to produce posts, poles, lumber and firewood.

-The local economies, public services, school systems, and road and highway programs of the counties are dependent upon receipts from national forest lands from oil and gas leasing, timber, and grazing.

-Big game hunting is extremely important in the area from both a recreation and economic standpoint. Hunting on national forests maintains animals in balance with their habitat and provides income for towns and local outfitters and guides. Hunting also helps control animals that migrate out of national parks that may be carrying brucellosis, a disease very contagious to livestock which can force quarantine of large areas.

-Noxious weed control is practiced on national forest lands and coordinated with aggressive county and state programs to prevent their further spread and infestation to new areas.

Area statistics that could be affected within Sublette and Teton Counties on the Bridger-Teton National Forest portion of the ecosystem include:

25,565 head of cattle, 174 head of horses, and 3,750 head of sheep are permitted to graze on the forest within the ecosystem boundary. These permits are held by 98 operators. The length of the grazing season varies between two to four months for these animals;

1,055,400 acres of classified wilderness already exists in my area, or about 48 percent of the Yellowstone ecosystem area on the Bridger-Teton National Forest. In addition, 165,340 acres are designated as wilderness study areas;

approximately 1,082,800 acres outside of wilderness areas are available for oil and gas leasing. When comparing the lease rental fee of $1.00 per acre for the first five years of a lease, and $3.00 per acre for the second five years, together with the nonrefundable lease application fee of $75.00, the potential Department of Interior collection for this area amounts to between $4 million to $6 million annually. Fifty percent of this is returned to the state for disbursement to counties. Royalty payments from discoveries could add significantly more revenue.

Between three and four million board feet of timber is utilized annually by small, local sawmills.

Water production occurs in the amount of nearly 3.5 million acre feet yearly from the Snake and Green Rivers systems. Wyoming and its citizens must continue to have access and title to water originating on federal lands free from encumbrances on impoundments and uses.

The potential economic losses of critical and strategic minerals through wilderness designation have been addressed in studies by the U.S. Geological Survey. Of 332 wilderness areas studied, the USGS considered 220 as favorable for the occurrence of one or more mineral or energy resources. Because of lack of an analytical model, little or no information is available to estimate the lost value of the mineral resources.

-I appreciate the opportunity to testify in this hearing on the Greater Yellowston Ecosystem, and I stand opposed to any additional Congressional legislation in this area.

[illegible]

State of Wyoming
Teton County
P O Box 1727 Jackson Wyoming 83001 (307) 733-4430

JOINT OVERSIGHT HEARINGS ON GREATER YELLOWSTONE ECOSYSTEM

WASHINGTON, D.C.
October 24, 1985

Statement of Board of County Commissioners, Teton County, Wyoming by G. Bland Hoke, Jr., Commissioner

Good morning. It is a great pleasure to be here today in this distinguished company. My name is Bland Hoke and I am here today representing the Board of County Commissioners of Teton County, Wyoming. To provide a bit of personal background, I am in the real estate business in Jackson Hole, Wyoming and my educational background is in economics. In addition to my duties as a Commissioner and businessman, I also serve on the board of directors of a local bank and as a trustee of the Jackson Hole Land Trust.

I'd like to convey my appreciation and that of my fellow commissioners to you for holding this fact finding hearing. It is appropriate that you do so, because you are addressing an idea which has great potential to stir the imagination of the American people. National recognition of the Greater Yellowstone Ecosystem could have major economic and environmental effects on the three states of Idaho, Montana and Wyoming.

In Teton County, our community has a growing awareness and support of our tourist-based economy which is uniquely dependent upon maintaining the environmental resource which sustains it. Let me give you a brief overview of Teton County.

Almost 97% of Teton County, Wyoming is in federal ownership. Grand Teton National Park is totally encompassed in our boundaries. We have about half of the 3.4 million acre Bridger-Teton National Forest and portions of the Targhee National Forest. Included in our county (within the Bridger-Teton National Forest) is the famed Teton Wilderness and the newly created Gros Ventre Wilderness as well as the Palisades Wilderness Study Area. We also have the National Elk Refuge which provides winter refuge for approximately 8,000 head of elk. Because of the preponderance of federal public lands interspersed with 75,000 acres of private land within Teton County, we are accustomed to working closely with federal and state agencies. Furthermore, we know that wildlife is no respector of lines drawn on maps. The public as well as the private lands of Jackson Hole include critical wildlife habitat, particularly along the riparian lands of the Snake River.

In short, our county is like a microcosm of the greater Yellowstone ecosystem with nearly all of the jurisdictions and conflicts that are played out on a larger scale in this last great block of wild lands in the lower '48.

There was great local resistance to the formation of Grand Teton National Park in the early days of Jackson Hole. But to repeat our position, there is now a recognition within our community that the tourist based economy of our area is dependent upon maintaining the environmental resource which sustains it. We believe that the long term economic destiny of this region lies in tourism and recreation. In stating this belief, we are not arguing for expansion of national parks or for "buffer zones" which are managed as national parks or wilderness areas.

We do, however, support a much more integrated approach to management of these nationally significant lands. Because of the unique character of the greater Yellowstone ecosystem, it seems to us that management directions that might be appropriate in most national forests may not apply here. We believe that scenic, wildlife and recreational values should receive the highest priority in this part of the country. Commodity uses like timbering and oil and gas should be accommodated only when their effects do not threaten the long-term primary values. In addition, we would like to see integrated management of public lands so that consideration is given to the cumulative effects of land use policies on the region.

Our board of commissioners recently received copies of correspondence between aides in the offices of Governor Evans in Idaho and Governor Herschler in Wyoming discussing the possibility of a forum for state and local officials within the greater Yellowstone. We are extremely supportive of this idea. We urge broad participation from local economic and governmental entities as this idea evolves. A series of intergovernmental meetings held in

Jackson Hole over the past few years have proven to be most valuable in improving communication and understanding. We would expect to see the same positive results on a larger scale.

Ultimately, we think a shared understanding and support for the greater Yellowstone concept among many people and entities in the region could result in an enormously powerful marketing tool for the recreational economy. The economy of the Northern Rockies has been slowly maturing. Over the last one hundred years, we have seen the transition from laissez faire exploitation of natural resources to a regulated exploitation of natural resources with mitigation of environmental impacts. Wyoming has seen booms and busts throughout its history. People in this region are realizing that protection of the natural, scenic and wildlife values is essential to the economic stability that we seek for the long term. It is high time to begin a thoughtful dialogue which elevates these scenic, recreational and wildlife values of the greater Yellowstone ecosystem to a level ensuring quality and perpetuation for generations to come.

HON. ANN STRAND
STATE REPRESENTATIVE, SWEETWATER COUNTY
WYOMING STATE LEGISLATURE

Mr. Chairmen and Members of the Subcommittees:

My name is Ann Strand, state Representative to the Wyoming Legislature from Sweetwater County. Sweetwater County lies south of the proposed Greater Yellowstone Ecosystem boundary. My county is made up of 69 percent federal land on high dry desert and produces oil, gas, trona, coal, sand and gravel. Primarily an industrial county, Sweetwater's public lands provide grazing for domestic livestock, a large wild horse herd, and many species of wildlife with a predominant antelope population.

I stand before you to address a greater concern, the designation of an ecosystem area concept to be managed by the National Park Service. Present management plans by the Forest Service incorporate multiple-use concepts, not the narrow concepts of only wildlife, fisheries, recreation and scenery as proposed by the Greater Yellowstone Coalition for the ecosystem area. Surely the worldwide demand for food, minerals and energy must be a factor in any decision-making that precludes multiple use.

William Penn Mott, Jr., Director of the National Park Service, at a meeting of the Greater Yellowstone Coalition in Yellowstone Park in June of this year, stated: "When in doubt, we must err on the side of preservation. Should we subsequently find ourselves wrong, we can always provide for more use."

That attitude tends to break down state initiative and to devitalize state and local policies. It simply invites aggrandizement of national power and prevents any cooperative decision-making once that power is concentrated in Washington. Cooperation becomes increasingly difficult because the stronger member of the combination usually calls the tune. Add to that the human factor that admits that one of the most difficult phrases in the English language is, "I was wrong!"

To continue to quote Mr. Mott, from the same speech in June: "There are private and governmental entities with major interests at stake and roles to play."

Indeed, there are, but these entities will be excluded with an internally-selected task force membership. Listen, as I read this quote from the Greater Yellowstone Tomorrow Project Draft Outline III, received in September 1985: "The Task Force presiding over the development of these public policy scenarios would reflect the diversity of interest involved in one way or another with the Greater Yellowstone. Representatives would need to come from the Park Service, the Forest Service, the three state governments, local and national conservation interests, the extractive industry, tourism, agriculture, the scientific community, local government and the general tourist population."

All of us agree with those broad-based area-of-interest representatives; but the very next paragraph abrogates any idea of unbiased representation: "Actual selection of the Task Force will require great care. Its administration, fundraising and staffing will be done through the Greater Yellowstone Coalition, the parent entity to the overall Tomorrow project." (Emphasis added)

I have attached for your information a membership list of the organizations who compose the Greater Yellowstone Coalition. There are no members of any group not historically affiliated with the conservation movement, and several conservation organizations that are active in Wyoming are notable by their absence in the membership list.

Now back to Mr. Mott's statement in June calling for a regional plan for management of the Greater Yellowstone ecosystem: "The preparation must be accompanied by the concerted effort of all major affected entities, keeping in mind that maintaining a wild natural environment must be the foremost objective."

I have a question--the one that brought me to Washington. Do the plans being pushed forward for the proposed ecosystem encroach upon the rights of citizens who live within its boundaries? I am earful that the answer is a resounding "YES!" if the solution embraces Mr. Mott's statement, "maintaining a wild natural environment as its foremost objective."

If multiple-use of the ecosystem is lost, will the concept of condemnation of individual property rights through the power of eminent domain become the tool to achieve "the foremost objective"? Preserving individual property rights must be of primary consideration. Will efforts to maintain the status quo deny the "in-holders", people with deeded land surrounded by national forest land, any options for development? Or will they be required to seek permission from the National Park Service or the Greater Yellowstone Coalition? What about our cities, towns and unincorporated communities encircled in the proposed ecosystem? Shall they also not be allow to grow?

I am a Democrat, a member of the minority party in Wyoming, and because I am, I firmly embrace the principle that government exists only to help those who cannot help themselves. I cannot live with the thought that I did not exert whatever small influence I may have to protect individual property rights.

I do not believe that Wyoming citizens, as well as the citizens of Montana and Idaho who live within the proposed ecosystem boundaries, would deliberately seek to "foul their nests." The protection of multiple-use concepts, as well as the freedom to use them, is a concern to each of us. The obligation of our three states to the continued magnificence, enjoyment, benefits and use of Yellowstone National Park and its surrounding areas has been one we have accepted with appreciation and dedication to their preservation.

I urge that no further legislation diluting our citizens' participation and use be forthcoming.

Greater Yellowstone Coalition
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Bob Anderson, Executive Director
(406)586-1593

Member Organizations

REGIONAL

Jackson Hole Alliance for Responsible Planning
Idaho Conservation League
Montana Wilderness Association
California Wildlife Trust
Madison-Gallatin Alliance
Montana Audubon Council
Northern Rockies Chapter — Sierra Club
Montana Wildlife Federation
Wyoming Wilderness Association
Conservation Endowment Fund
Montana Chapter — Sierra Club
Committee for Idaho's High Desert
Idaho Environmental Council
Wyoming Chapter — Sierra Club
Yellowstone Valley Audubon Society
Murie Aubudon Society
Wildlife-Wildlands Institute
Montana Environmental Information Center
Montana Outfitters and Guides Assoc.
Great Bear Foundation
Wyoming Outdoor Council
Gallatin Wildlife Association
North Yellowstone Rim Alliance
Park County Resource Council
Last Chance Audubon Society
Bear Creek Council
Madison Gallatin Trout Unlimited
Pintlar Audubon Society
Sacajawea Audubon Society
National Outdoor Leadership School
Project Lighthawk
Fishing and Floating Outfitters of Montana
Snake River Audubon Society

NATIONAL

International Trumpeter Swan Society
National Audubon Society
Wildlife Conservation International
American Wilderness Alliance
Good Sam Club
Natural Resources Defense Council
Defenders of Wildlife
National Parks and Conservation Association
The Wilderness Society

MERLE BAUMAN
CHAIRMAN
CITIZENS FOR MULTIPLE USE

My name is Merle Bauman and I live in Dubois, Wyoming where I am the owner/manager of an auto parts and hardware business. I am a member of the Dubois City Council and have been active in my community as a member of the Chamber of Commerce. I have lived in Dubois for eight years and have come to know this community of 1,150 people and their way of life.

Mr. Chairman I am here today on behalf The Citizens for Multiple Use. Our organization is composed of citizens from northwestern Wyoming who have an interest in maintaining the multiple-use management which has been traditional in our area for generations. Our organization is less than one month old and has already over 150 members. We are ranchers, local businessmen, teachers, senior citizens, loggers, farmers, and environmentalists.

The members of Citizens for Multiple Use have asked me to come to testify today because we feel it is time for those of us who live and work is the small communities of northwestern Wyoming to have a voice in the public policy actions which affect our communities. We feel that Federal policies concerning public lands in Wyoming have a direct impact on those of us who reside in the local communities. We are not, however, directly involved on a day-to-day basis with public land policy makers. It appears to us that Government actions regarding the use of our public land have largely been in response to the pressures of special interest groups and have ignored the impacts on the local citizens.

As a result, we are now faced with a set of public land use decisions and policies which make it virtually impossible for us to continue those commercial enterprises upon which we depend for our livelihoods. The foundation of our communities in Northwestern Wyoming is seriously threatened.

As I understand it, the Subcommittees are here today to: (1) assess whether Yellowstone National Park is being harmed by activities outside the Park boundaries; and (2) to determine what courses of action should be taken if there is, in fact a problem.

Let me first state that Citizens for Multiple Use recognize Yellowstone National Park as a unique and unequaled natural wonder, worthy of special attention. The Park is a major tourist attraction and an important element of the social and economic structure of our community. The Citizens for Multiple Use believe, however, that the economic survival of their communities is threatened by the preservationist philosophies of the Greater Yellowstone Coalition.

At one time, the early settlers of the area around what is now Yellowstone National Park focused more on resource development than resource protection. This sometimes led to resource abuse as short term profits overrode concerns for long term productivity. As settlements became more permanent and settlers thought more about the future, resource use patterns found the natural balance between competing resource uses. This philosophy of balance was practiced for many years before it was finally incorporated into the Multiple-Use and Sustained-Yield Act of 1960.

The careful development and thoughtful compromise behind the recent Wilderness Acts have heightened the environmental consciousness of the public. Public concerns for our public lands have virtually eliminated the attitudes which sometimes have led to the abuse of our natural environment. I think that it is safe to say that today, there is virtually no support in our communities for those who would abuse our public resources.

All of us now are concerned about the environment -- and in that sense, we are all environmentalists. I fear, however, that the resource-use pendulum has swung all the way from "abuse" to "non-use." It seems that we see more and more proposals which would limit man's activities to the point that he will be excluded from the forest. The Citizens for Multiple Use believe that the philosophy of balance should govern public land management policies.

As a resident of the area under discussion, I'd like to give you a quick vocal tour of the area to give you a better understanding of how lands are currently managed.

As we leave our town, we travel for a few miles through private lands. A small percent of Fremont County is owned by private individuals and is used for ranching, farming, homes, businesses, timber harvest, etc.

Soon we enter land managed by the Bureau of Land Management. At this point, we can see that this land is used primarily for cattle grazing, but that hunting and fishing, timber harvest, oil and gas exploration and other activities also occur.

After A few more miles, and we enter lands administered by the National Forest Service. By law, these lands are managed for multiple uses. Timber harvest predominates on some acres, while wildlife management, recreation, and grazing predominate on other acres. All acres are managed so as to protect the productivity of the basic soil and water resources. These lands play an important part in the economic and social structure of our community -- from providing the raw material for several local industries, to providing a pleasant place to spend our leisure time, to providing firewood to heat our homes.

After a few more miles, and we are at the road's end. We will have to leave behind those of you not prepared to hike or ride a horse.

As we walk through the Wilderness Area, we now notice that there is only one use -- unroaded recreation -- and one objective -- preservation of the natural ecosystem. You might be surprised to find out that many citizens of our area were in favor of setting aside some acres as Wilderness. Determining exactly how much to set aside, however, this was a difficult and painful task. Most of us feel that those decisions are now behind us. We hope that we won't have to go through that divisive process again in the near future.

There are several ways into Yellowstone National Park. We can enter at a number of highways or travel through a series of Wilderness Areas. One thing is very clear, though, no matter how you come in to the Park, the area is managed for preservation first and recreation second. Our town has benefited from the tourists drawn to the Park. We understand that people come to see not only the geologic wonders of the park but also the subtle beauty of the natural environment as well. We are grateful to have the Park nearby not only for the economic benefits we derive from it, but for aesthetic reasons as well.

My hope is that our tour has shown you that all the pieces fit together to make a place where we can successfully protect the natural environment while using some resources for economic purposes. The balance between these two objectives is delicate. The Citizens for Multiple Use feel that the balance is achievable and urge these Subcommittees to abstain from any action which would take away our ability to earn a living by using our natural resources.

With me today is Mr. Jim Robinson who is a fellow citizen from Dubois and who serves as our superintendent of schools. Jim also is the Vice-Chairman of Citizens for Multiple Use.

Dr. Robinson will provide additional testimony regarding the integrated economic structure of our community and our views on the so called Yellowstone Ecosystem.

DR. JAMES ROBINSON
VICE CHAIRMAN
CITIZENS FOR MULTIPLE USE

ON BEHALF OF
CITIZENS FOR MULTIPLE USE

As year round residents of Dubois in Fremont County, Wyoming we have found that our existence is dependent upon multiple uses of our public lands. Lumbering, oil, gas, grazing interests and tourism provide an integrated economic structure for the communities of Northwest Wyoming. As each of these interests serves as a cog in our wheel we are continually reminded of the necessity to balance and maintain each for its contribution in the structure.

Of equal importance is the fact that we have chosen to live where we do for the quality of life afforded us in the various uses of these public lands in Western Wyoming. Backpacking, camping, photography, hunting, fishing, snowmobiling, cross-country skiing, and horseback riding are but a few of our recreational pursuits. The public lands provide playgrounds for such activities.

In combination we have established an economic basis for our community from the same public lands upon which we recreate. Essentially, we have found a balance of multiple uses which allows us to support ourselves in our chosen environment.

The preservationist movement is frequently discussed and is a popular issue with the media. This special interest movement has a nationwide politically motivated membership. Generally, these members enjoy the luxury of not having to concern themselves with providing a tax base to pay for social services like the school system with which I am affiliated. Neither do these members carry any responsibility for providing employment for a labor force resident in communities like ours. Needless to say, such special interests create a considerable amount of anxiety for those of us who do bear the responsibilities for providing services and employment.

The concepts associated with the Greater Yellowstone Coalition preservationist philosophy are particularly threatening to us. The imbalance created by such concepts invalidates our roles as full-time environmental caretakers of the public lands which furnish us our existence, both economic and recreational. The preservationists understand the concept of a balance of nature, yet in turn, they threaten our existence by suggesting changes which create an imbalance between economic and recreational factors. We view such an imbalance as a direct threat to our livelihoods and ultimately our opportunities to reside in the places we have chosen. Are we not the endangered species? Let me illustrate.

In our county the oil and gas industry's share of property assessed for taxation in fiscal year 1984 was 71.98% of the total. Our school system is supported by these property taxes. One in every six students in the school system comes from a family where members are directly employed by the timber products industry. Reduced timber harvests will threaten the livelihoods of these families. If these families are forced from the community, the schools in turn will experience a reduction in force. Ranching is the predominate land use with 90% of the agricultural land devoted to grazing and only 6% to crops. Sportsmen draw upon our abundant wildlife resources.

In our State, Uncle Sam owns nearly one-half of the surface and two-thirds of the mineral estate. The past several years have seen bitter struggles over wilderness additions and surface management policies. We have been forced to accommodate these additions and policies. For the most part we have survived and adjusted. The tolerance of our adaptability is limited, however. We have peacefully co-habited with Yellowstone interests for 112 years and derive a part of our earnings from the visits of 4 million people annually. We appreciate the natural heritage preserved for generations. We are sincere stewards of lands both park and public. At the point of establishment the Park was dedicated to the purpose of the "benefit and enjoyment of people." Now preservationists are suggesting increased boundaries or buffers where "minimal disturbance's by man's activities" will cancel our present existence as we know it and dismiss the original intent of the Park itself.

We hope you will "leave well enough alone" so that we will be available to greet you on your next visit to Yellowstone.

GREATER YELLOWSTONE ECOSYSTEM CONGRESSIONAL HEARINGS

October 24, 1985

I am Gordon Mickelson of Big Piney, Wyoming: a third-generation rancher, a former State Representative, and currently serving on the Board of Trustees for the University of Wyoming, Chairman of the Board for First Wyoming Bank,N.A.-Big Piney, and a second term as a member of the Bridger-Teton Grazing Advisory Board.

I feel that there are enough current laws on the books to protect the National Park Service and surrounding Wilderness areas. While there are some who feel a need to further safeguard our protection of this area in order to assure correct management between the Federal Agencies involved, to my way of thinking, there is no indication for a need to legislate a "super-agency" to handle this coordination effort.

Proponents of a Greater Yellowstone Ecosystem are not commodity-oriented, and would wish to put total emphasis on recreation and wildlife. While this is their view, there are many citizans in Wyoming who still depend on the balance of multiple use of these lands to earn a living. I am speaking of not only ranchers like myself, but also of oil and gas companies, small lumber mills, construction companies, outfitters and guides, and many others in service oriented businesses, who aggregately pay the vast majority of both Federal and State taxes, as well as the bulk of land usage tax.

We have Federal and State laws in great abundance to play "watch-dog" to protect this nebulous area: Wilderness Act, Wild and Scenic Rivers Act, Clean Air Act, and many others we update and amend from time to time, in order to insure that we will all be able to learn to live in our current environment with a functional balance. We must not go out of our way to preserve an area for the philosophy of a few, who demand management only under "natural conditions."

I would seek better coordination between the agencies involved to insure this balance, but would be opposed to additional legislation to make them do the job they are already charged adequately to do.

Gordon Micklson

National Audubon Society
NATIONAL CAPITAL OFFICE
645 PENNSYLVANIA AVENUE, S.E., WASHINGTON, D.C. 20003 (202) 547-9009

STATEMENT OF
NATIONAL AUDUBON SOCIETY

ON THE

GREATER YELLOWSTONE ECOSYSTEM

BEFORE THE

SUBCOMMITTEE ON PUBLIC LANDS

SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION

OF THE

HOUSE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

PRESENTED BY

AMOS S. ENO AND BROCK EVANS

OCTOBER 24, 1985

TESTIMONY BEFORE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS SUBCOMMITTEE ON PUBLIC LANDS AND SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION ON THE GREATER YELLOWSTONE ECOSYSTEM

OCTOBER 24, 1985

Mr. Chairman, distinguished members of the Subcomittee, I am Amos S. Eno, Director of Wildlife Programs. Appearing with me here today is Brock Evans, Vice-President for National Issues. We appear on behalf of our 5,500 members in Idaho, Montana, and Wyoming and over one half million members nation-wide. High among Audubon's priorities are the protection of wildlife, wildlife habitat, and natural ecosystems. Yellowstone holds a special place in this regard.

Today we have heard ample testimony about the need to manage the Yellowstone ecosystem as a single entity. We have also heard concern over the potential threats and impacts to Yellowstone from, among other things, timber sales, oil and gas leasing, excessive road building and various forms of encroachment from bordering areas.

These are real problems, and Audubon shares many of the concerns expressed about them by others today. However, we think it is important to look beyond the enumeration of threats in order to focus on existing initiatives and potential new mechanisms which can lead us to continued resolution of outstanding problems and holistic management of the ecosystem.

For the past several years, Audubon has sought to work with responsible agencies to achieve solutions to outstanding resource problems in the Yellowstone region. Audubon's interest and commitment to the goal of wisely managing and conserving the resources of the Greater Yellowstone Ecosystem (GYE) is illustrated by the following efforts: A) helping to implement an

interagency grizzly bear management program; B) establishment of the grizzly bear reward program; C) efforts to find private matching funds to clean up West Yellowstone garbage facilities and remove other garbage attractants from grizzly habitat; D) review and comments on draft forest plans; E) founding and operation since 1963 of the Audubon Camp of the West in Wyoming; F) our continued interaction with the Interagency Grizzly Bear Committee; and G) our work to ensure that the National Park Service, Fish & Wildlife Service, and Forest Service have sufficent funding from Congress to conduct their management programs in the Greater Yellowstone Ecosystem. A further example of our efforts on behalf of this ecosystem is the work of local Audubon chapters and members to secure wilderness designation for the best of the superlative wildlands of the region, including the Gallatin Range and Beartooth Plateau in Montana, and the Deep Lake/Line Creek, DuNoir, and roadless parts of the western slopes of the Teton Range in Wyoming.

Looking beyond the emotion, Yellowstone as a core area is currently better protected and buffered than most of America's premier parks. With the exception of its extensive western border (the Targhee National Forest), Yellowstone is bounded mainly by wilderness areas as well as a corridor next to Grand Teton National Park. This at least provides the raw materials for ecosystem/biosphere management. In comparison, the Everglades and many other national parks do not have the luxury of such a buffer zone.

Rather than dwelling upon the difficulties, legal, bureaucratic, and otherwise, in ecosystem management, we wish instead to accentuate the positive by focusing on the concept of Yellowstone as an ecosystem which could be managed within existing governmental frameworks and statutory mandates. The current program to protect the grizzly bear provides an excellent example of both the strengths and weaknesses of the existing system, and provides us with an important reference point on which to measure future efforts.

If "Old Faithful" is the geologic symbol of Yellowstone, the grizzly bear is the wildlife symbol. Over the past ten years, thousands of man-hours, and hundreds of thousands of dollars, have been expended on promoting the recovery of the Yellowstone grizzly population. This effort has altered the way we view the Yellowstone ecosystem and has had a dramatic affect on the state and federal agencies charged with managing some aspects of the GYE. Some examples:

1. Creation of the Interagency Grizzly Bear Committee (IGBC) marks a watershed event in bringing together the plethora of federal and state land management agencies to focus on issues that transcend political boundaries.

2. Efforts to manage the grizzly have required an "ecosystem" approach since the grizzly ranges widely and cares little for political boundaries. The bear is not the only beneficiary of such efforts, since elk and numerous other wildlife species and "wilderness" attributes are the direct benefactors of grizzly bear management.

3. Years of fire suppression and other practices have allowed vegetation in some parts of the GYE to mature past that successional stage optimal for grizzly bear habitat; prime habitat management for bears requires practices such as controlled burning, while continued multiple use of grizzly habitat dictates new approaches to backcountry use such as metal caches and closed areas.

4. Formulation of the Yellowstone guidelines (now in development for all grizzly bear habitat) has brought a zoning approach to bear management by designating areas where the bears have priority (MS/1), areas where other uses are on equal footing with the bear (MS/2), and areas where grizzly occupation is not a desired priority (MS/3).

5. Currently there is communication and cooperation between the NPS, FS, BLM and state agencies on both administrative and on-the-ground management levels that in pre-grizzly bear recovery and IGBC days would have been unthinkable.

6. Cumulative effects analysis has been developed and conducted to determine habitat suitability of Yellowstone for grizzlies. At this moment, approximately 80% of the habitat has been mapped. This effort provides for the first time "anticipatory management capabilities". This

same management can be applied to other species such as elk, whooping cranes, and trumpeter swans, as well as providing a baseline gauge for assessing proposed commodity and recreational activities and their impacts.

7. As a result of the National Forest Management Act, forest plans for the five forests surrounding the park are now in the process of being finalized. Bear recovery programs are incorporated into this process. The existing forest plans range from modest to substantial improvements over earlier drafts; the Shoshone NF plan in particular is a superior document.

Given these advances, where do we go from here? Outside of broad legislative mandates, Congressional proclamations, and other exhortations, what processes exist to help continue the progress toward a holistic management of the GYE?

To begin with, all the effort and information contained in the five different forest plans and national park master plans can be brought together and examined in context of the bigger picture: a "Greater Yellowstone Ecosystem Plan," if you will. The on-the-ground professionals of the Forest Service and National Park Service can take their individual plans and undertake a coordinated master planning process during which future trends are forecast and conflicts are drawn out. Where conflict exists or can be anticipated, new management directives can be drafted and the "GYE plan" worked into the individual park/forest unit plans. Outside review by interested parties, especially local government entities, should be integrated and constructive participation by all interested parties encouraged early enough in the process to make a difference. While such a process is not perfect, recognize that first, it utilizes existing governmental structures and builds upon the expertise of the land management professionals; secondly, the process permits the integration of private as well as public interest in an ecosystem-based approach; and thirdly-- and most importantly-- this process can be undertaken right now without the necessity of legislation, or undue bureaucratic delay.

If we were to examine the GYE today and identify its component parts, we would find five elements currently requiring ecosystem-wide management by the administrating agencies: water, air, elk, grizzly bear, and humans. While there may be more elements to this picture, it is necessary to define such an abstract term as "ecosystem" in order that concrete management approaches can be formulated. The Yellowstone Grizzly Bear Guidelines are illustrative of how an ecosystem approach can be defined and broken down into on-the-ground actions. The guidelines take the broad term "grizzly bear management" and break it down into decisions on timber and fire management, wildlife management, recreation management, and minerals, watershed, and special use management that require consideration for the bear. Taking the five components identified above, we find the following programs in place.

Various programs are currently in place to monitor both the air and water quality of the Greater Yellowstone ecosystem. Monitoring of acid deposition, water quality monitoring, and other programs already exist. Where these resources are perceived to affect bordering lands, these programs are often shared by more than a single national forest, park, or other government entity. The major impediments facing these programs are not lack of interest or coordination, but lack of funding. For example, the Shoshone National Forest has written a water resources monitoring plan, but lacks money to implement it. Another water-related problem stems from the recurrent stocking of non-native species of trout and other related fishery management decisions which have demanded the coordination of state fish and game departments and the federal land management agencies. As for elk, this preeminent game species has long fostered cooperation between the various land management agencies. Currently the National Park Service, Forest Service, and state fish and game organizations meet on a regular basis to discuss both elk and bison management.

The fourth component, the grizzly bear, has forged a new spirit of cooperation by management agencies in the Yellowstone ecosystem, as has already been outlined. The process has not been easy, nor is it completed. Many of the challenges that currently face bear recovery efforts, however, are more communication and public relations problems than biological or scientific issues. There has been a quantum leap in bear knowledge in recent years. Unfortunately, there is a lag time between the formulation of new research data, its implementation into management actions, and integration into the general public's perception of what grizzly management is, and just as importantly, is not. Where actual management goals differ from public and political perceptions, conflict arises. Such conflicts are illustrated by grazing disputes, augmentation of relic grizzly populations, defining what constitutes a "recovered" population, and mineral leasing which could potentially lead to habitat distrubance through full field development.

The human resource is perhaps the most difficult species to manage on an ecosystem basis. We have mapped grizzly habitat components, followed elk migrations, and studied the geothermal system of Yellowstone. However, there is little empirical data available on the movements, and "minimum home range requirements" of humans in the GYE. While this statement may sound facetious, we believe that the human presence in the GYE is both 1) the single greatest potential threat to the long-term protection of the ecosystem, and 2) the foundation for the future economic viability of the region. This impact comes not only from projections of man's traditional extractive activities, but increasingly from recreational development. The GYE is a mecca for a myriad of recreational uses (tourist income to the region in 1984 is estimated at approximately $525-540 million[1/]), including those traditionally considered consumptive hunting, fishing, trapping) and those once considered "non-consumptive" (backpacking, skiing, climbing, birdwatching, etc.). Unfortunately, there is no such thing as a truely non-consumptive use, and managers in the GYE are forced to recognize that every visitor, whether they are "adult toy aficionados" (whose idea of "getting away" is taking it all with them), "neospartan hedonists" (who believe that the less that is between one and the environment, the more one appreciates the latter), or anything in between consumes recreational resources along spatial, physical, and visual dimensions.[2/]

While the potential effects of clear-cutting, forest road building, and oil and gas exploration create a distinct visual image of rape and pillage, the effects of recreational overuse are often difficult to quantify easily and lack the visual media impact of new roads, stumps, oil pumps and dead bears.

[1/] Figure extrapolated from 1984 Park and Teton County, Wyoming sales tax revenues with similar levels of trade assumed for remainder of gateway communities.

[2/] John Baden, 1973, "Neospartan Hedonism, Adult Toy Aficionados, and the Development of Bureaucratic Purgatory."

Furthermore, recreation is an important part of the Forest Service's and Park Service's respective mandates, and the notion of controlling recreational access on public lands is very unpopular with each of the user groups, who are extremely competitive in asserting their rights of access.

A current example of this conflict is reflected in the Fishing Bridge campsite conflict. On one side it is clear that the continued use of the site for campgrounds adversely impacts grizzlies and potentially endangers humans coming in contact with bears. In opposition to this biological opinion, recreational and concessionaire interests generally view the bear as the element in the equation that should be moved.

The Park Service recognized the impact of the Fishing Bridge campsite on the bear in its 1974 Master Plan, and made a commitment to the Fish and Wildlife Service that it would close Fishing Bridge on completion of the new facility at Grant Village. The environmental community feels that the Park Service should adhere to its original agreement implementing Section 7 of the Endangered Species Act. However, the Park Service is currently being closely questioned by the Wyoming congressional delegation on behalf of Park County, Wyoming, whose residents feel they should have been consulted prior to the Park's decision to close Fishing Bridge. Their concerns focus on the loss of sales tax revenues from Fishing Bridge concessions and fear of the decreased tourist use of Yellowstone's eastern gateway, thereby diminishing Cody's stature and economy.[3]

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[3] The tax revenue question involves the transfer of tax revenue from Park County to Teton County, Wyoming. Revenue to Park County amounted to an estimated $25,000 in 1984. With the move of the Fishing Bridge facilities to alternate campsites within the Park, this money will be transferred to Teton County which taxes at a higher rate, hence tax revenues to the "region" from tourists will actually increase.

As a result, the final decision awaits preparation of a time-consuming EIS. The whole question over the closure of Fishing Bridge and its impact on the Cody community, together with the ramifications of these decisions on recreational opportunities should have been better coordinated between the Park Service, Forest Service, and the local communities. Clearly, closer coordination of all affected agencies and parties should benefit users of the GYE, the grizzly bear, and the ecosystem itself in the future.

Human-caused mortality of grizzly bears, especially females, is one of the biggest threats to the bear's recovery. With all the fear of extractive resource development-- which admittedly can indirectly affect grizzly populations-- in the period 1970 to 1984, a minimum of 179 bear deaths can be attributed to some form of recreation in the GYE (this figure includes reported control actions, accidental handling deaths, and known illegal deaths). This is not to suggest that we should not be concerned about impacts of timber sales, forest road building, and oil & gas development; however, we (the environmental community) are frequently too willing to criticize only resource developers as foes of the environment, without equally recognizing the truth embodied in Pogo's observation that "we have met the enemy and he is us."

More specifically, Audubon feels that the following considerations should be addressed:

A) Define and quantify the boundaries of the GYE, and those resources of special management concern that are trans-boundary. Concurrently, identify and quantify demands and impacts on these resources from commercial, recreational and other uses.

B) Currently the Greater Yellowstone Ecosystem is fragmented by numerous administrative units. For example, the five national forests report to three different Regional Foresters. Methods of streamlining the administrative bureaucracy to assist management of the GYE as a single system should be identified and considered for implementation.

C) Bring the federal and state land management agencies together with the local community and industry leaders, as well as national and local private organizations with an interest in the GYE, to discuss current management and possible alternatives. The role of the state F&G agencies and representatives from the affected towns and counties is vital in this process of cooperation and communication.

D) Recreational characteristics and studies of associated costs and benefits need to be fully understood if Greater Yellowstone is to be managed as an integrated system. Aside from better management, this research should quantify the benefits of a recreationally-based ecosystem, to be compared then with the economic benefits of the other competing users, including the more traditional extractive uses.

E) Though land management agencies have made great strides toward better communication and cooperation on the GYE, there is need for improvement. Existing mechanisms for interagency cooperation, such as the Greater Yellowstone Coordinating Committee, must be strengthened and institutionalized, while still allowing the individual agencies flexibility.

F) While we recognize that there is demand for selective timbering, mineral leasing, and other extractive uses of the GYE, such activities need to be considered with utmost sensitivity. Further, the Forest Service needs to recognize that here their mistakes, if any, will be long remembered, given the spectacular nature of the country, its uniqueness, and high natural visibility, and that their successes will be taken for granted.

G) We are very concerned about controversial proposals for roads and/or timber sales in areas which are especially sensitive grizzly or wildlife habitat, such as the Mol Herron Creek and Tom Miner Basin in the Gallatin National Forest, Union Pass/Upper Green River in the Bridger-Teton, and Wolf Creek and the Clark Fork District of the Shoshone. It seems to us that, as long as there are differences of opinion about the prospective impact of roads and timber sales on key wildlife areas, the Forest service should proceed with great caution. As ongoing habitat mapping is completed, the Forest Service will have increasingly accurate information on the distribution of high quality habitats and additional information on the effects of roads on grizzly bears. This will allow better decision-making on the routing of roads and improved management of road access which could disrupt grizzly habitat.

H) Concerning oil and gas leasing within the GYE, we feel that the national forests within the ecosystem should pool their experts and information and prepare an ecosystem-wide study, perhaps an EIS, detailing the long-term and cumulative environmental impacts of existing and proposed leases, and field development potentials.

We would like to devote our final comments today to a public relations problem plaguing the efforts of conservation organizations. A person need only pick one local newspaper in the GYE and read it for a week to recognize the problem. Many defenders of the GYE concept, by and large, are seen by local residents as meddling outsiders that come out into the Greater Yellowstone Ecosystem, shove preservation and ecology down the throats of the locals on behalf of bears, trees, and wilderness, and then go back to their comfortable city homes, leaving the locals to deal with the economic consequences of the new designations, restrictions, and regulations.

While this perception may be growing, surely its accuracy is exaggerated. Witness the fact that many Audubon members in favor of ecosystem management are from the very areas that would be affected. Perceptions, however, even if exaggerated, must be dealt with in order to generate widespread local support for the approach we are suggesting. While much of this conflict can be attributed to the inherent difficulties of balancing local with national interests, there is a certain amount of truth in this perception, at least historically.

The point Audubon would like to make today is this: If we are going to be successful in such efforts as promoting recovery of the grizzly, restoring the whooping crane and wolf to the GYE, and preserving the natural wonders of the GYE for future generations, it will not be by ignoring the views of the local residents. Instead, those committed to managing the GYE as a single entity serving multiple interests must work together with the local residents and state and federal land management agencies toward a workable solution. The parties will not always agree, and the result will likely be a compromise fully acceptable to no one, but the end result will more closely resemble an "ecosystem" approach, i.e., one that incorporates both human and non-human residents of the GYE, rather than one serving the interests of any single party at the expense of others.

Thank you for this opportunity to appear before you today and present the position of the National Audubon Society.

STATEMENT OF THOMAS McNAMEE
TO THE SUBCOMMITTEE ON PUBLIC LANDS AND NATIONAL PARKS OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, U.S. HOUSE OF REPRESENTATIVES,

OCTOBER 24, 1985.

Mr. Chairman, and members of the committee:

My name is Thomas McNamee, and I am the author of a book called The Grizzly Bear, which focuses on the grizzlies of the greater Yellowstone ecosystem. I'm grateful for this opportunity to try to help them.

The grizzly bear population of the Yellowstone ecosystem is in deep trouble. There are a lot of people in federal agencies who are justly proud of their efforts to save the Yellowstone grizzly, but their just pride sometimes obscures the inescapable fact that their efforts are not succeeding.

There are probably about 30 percent fewer grizzlies in this ecosystem than there were 20 years ago, and their number continues to fall. I'm supplying you with copies of a recent scientific paper describing a computer model that predicts the future status of the Yellowstone grizzly population under a wide range of variation. The model was run for two time spans, the first of 30 years and the second of 100, both starting with the latest available survivorship figures and the latest estimated minimum number of females of reproductive age--a grand total of 36 mother bears as of last spring. The mean result of 5000 runs of the 30-year model projects a drop of nearly 60 percent in the crucial mother grizzly population by the year 2015. Of 2000 runs of the 100-year model, almost half result in total extirpation. And this is under current conditions, which seem like a dream compared to what's in store.

There are manifold habitat problems for grizzlies in the Yellowstone ecosystem, and there are more on the way, particularly in the five national forests that form an indispensable part of this population's range. Nevertheless, given a serious long-term conservation effort, the habitat is fully capable of supporting a thriving grizzly population in perpetuity. We will never have a chance to carry out such an effort, however, unless immediate and dramatic action is taken to deal with the ongoing catastrophe of man-caused mortality.

Right now, and year after year, more grizzly bears are being killed in this ecosystem than can possibly be naturally replaced. Of the latest estimated minimum of 36 reproducing females left alive (a number probably already too high), we may be experiencing a net loss of two more every year, and it's easy to see where that will lead, and how quickly.

Most of this killing is illegal but preventable. Nonetheless, despite the many splendid ideas propounded in federal documents like the Guidelines for Management involving Grizzly Bears in the Greater Yellowstone Area and the Grizzly Bear Recovery Plan, federal agencies are failing to stop the killing.

Why?

In part, simply because they don't enforce the rules. I was in the heart of Yellowstone grizzly country in the Bridger-Teton National Forest this past summer, and it was a virtual powder keg of bear problems just waiting to explode--filthy camps full of unsecured food, illegally dense concentrations of people and livestock, lots of firearms (and not a little noise of gunfire), and outfitters who showed nothing but contempt for the grizzly guidelines. The young backcountry ranger in charge told me he wanted to write citations but was under orders not to. Four grizzlies, by the way, have been illegally killed so far this year on the Bridger-Teton alone. I'm supplying you with copies of my correspondence with the Forest Supervisor; I think you'll find it interesting reading. The situation there, alas, is not untypical.

And why is that?

The underlying cause, I believe, is the veritably Gordian contrariety of management among the agencies, among individual administrative units, even among ranger districts. In the absurd belief that somehow we can "have it all," the Yellowstone ecosystem's two national parks, six national forests (reporting to three Forest Service regions), and three states pursue dozens of goals that simply cannot be reconciled with one another or with grizzly recovery, and there is neither coordinated planning nor central authority capable of slashing through the hopeless snarl. Every unit has its own objectives (often in conflict with those of the others), each agency has its own way of thinking (ditto), and even when they've agreed on a common purpose they all have their own interpretation of it, often so thoroughly unique that the others can hardly recognize it. The Interagency Grizzly Bear Committee is a proud achievement precisely because such elementary cooperation has been virtually unknown until recently--but I must stress that the IGBC, too, has failed to arrest the population's decline.

Meanwhile, the grizzly bear just goes on trying to live in what to him, as to any other sensible observer, is one place--Yellowstone--while all around him boundaries, rules, mandates, procedures, philosophies, self-congratulation, and mortal danger swirl in bewildering profusion.

It's no wonder the Yellowstone grizzly is dying out. But please know too that it is by no means too late. If we can stop the slaughter...if we can realize how much the grizzly bear really matters to our country, down deep, as a symbol of all that is gloriously wild...if we can begin to think of Yellowstone as what it is, a single ecosystem--and a gloriously wild one, like few others left on the planet--then the Yellowstone grizzly bear may yet survive.

Submitted as supplement to testimony of Thos. McNamee.

PROJECTED FUTURE ABUNDANCE OF THE YELLOWSTONE GRIZZLY BEAR

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Low densities, secretive behavior, and high mobility make grizzlies (*Ursus arctos horribilis*) especially difficult to census. Adult females with cubs are most readily observed, and the presence of the young provides additional cues for distinguishing family groups (individuals can be identified by cataloging coat colors, scars, tags, locations, etc., as suggested by Cole 1974). Reproduction begins at age 5 and cubs are produced at an average interval of just over 3 years. Summing the numbers of different females with cubs that were counted over 3 successive years thus gives an estimate of a minimal number of fully adult females in the population during the 1st year of any 3-year period. Although intensive efforts have been made to develop other census techniques, this method appears to provide the best presently available index of grizzly abundance in Yellowstone National Park and its environs.

The Yellowstone population is isolated from the other remnant grizzly populations and occupies an area roughly double that of the National Park, or about 20,000 km^2 in total. From the 1920's to the late 1960's much of the population was seasonally concentrated at garbage dumps in and near the Park and obtained an important supplemental food supply there. Between 1968 and 1971 the Park dumps were phased out, and procedures initiated to deny access by bears to dumps outside of the Park. Recorded mortalities roughly doubled in the 2 years (1970–71) of major dump closures, and a downward trend in counts of different females with young (Fig. 1) was initiated (since the index is cumulative, reductions in population size would influence the calculated index 3 years prior to the actual reduction). Closure of the dumps was followed by a significant decline in reproductive and survival rates. In the earlier years (1959–70) litter size averaged 2.1 cubs, and 70% of the females produced their first litter at age 5. In recent years (1974–82), average litter size has been 1.9 and about 60% of

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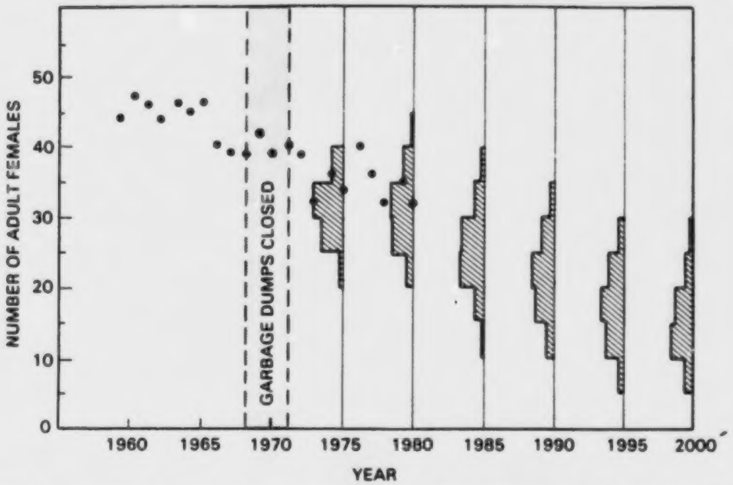

Fig. 1. Observed index of abundance (●) and projected population sizes (histograms) from a stochastic model of the adult female grizzly bear population of Yellowstone National Park and surrounding area. The index is based on 3-year sums of adult females with cubs, since these are the most visible elements of the population. A reduction in reproduction and survival rates after closure of open garbage dumps in and near the Park resulted in the observed decline in the population, and the general course of the likely future trend is illustrated by the histograms. Each histogram shows the frequency distribution of population size based on 10,000 simulations for periods of from 5 to 30 years. Each histogram was produced by an independent simulation, starting in 1970.

females produced first litters at age 6. Survival to age 6 decreased from about 38% to 23%, and annual survival rates for prime-age adult bears decreased from about 96% to about 92% (Craighead et al. 1974, 1976; Knight and Eberhardt 1985).

METHODS

In view of the declines in both population index and key population parameters, it is highly desirable to attempt a projection of the likely future course of the Yellowstone population. Such projections are usually accomplished with the Leslie matrix model, but there are two difficulties in the present situation. One is that, in the Leslie model, reproduction is expressed as a fraction of females in 1 year that produce young that are fully independent in the next year. Young grizzlies normally do not become independent of the female until about age 2, whereas reproductive rates are recorded at about 6 months of age (i.e., when females emerge from winter dens with cubs). The second problem is that the small present population may be importantly influenced by chance events. We have thus devised a stochastic model of the female bear population, implemented in repeated computer simulations.

In the model, age-specific reproductive

and survival rates are incorporated as probabilities, so that each individual's fate is decided by independent, annual random draws from a uniform probability distribution. An initial population of independent females was assigned to elements of a two-dimensional array classified according to the individual's age and reproductive status (alone, with cubs, or with yearlings). Each individual then moves through the array by way of annual determinations of survivorship (including that of any accompanying young) and reproductive success. Rates determined in the 1973–82 study period were used in the simulation and were reported by Knight and Eberhardt (1985). Only females were considered (beyond recruitment to independent status, usually at age 2), in 26 age-classes. Starting with an initial population of 61 female bears age 2 and older in 1970, corresponding to data given by Craighead et al. (1974, Table 9), independent sets of 10,000 simulations each were run in periods of 5, 10, 15, 20, 25, and 30 years. The outcomes are depicted as histograms of population size (Fig. 1) to suggest a likely range of index population sizes in future years. Inasmuch as reproductive and survival rates no doubt actually vary from year to year, the range of model outcomes may be less than would be produced if actual annual rates were known. Conversely, in the absence of human influences, compensatory responses might possibly narrow the range of outcomes. Various other techniques relevant to the study were described in detail by Knight and Eberhardt (1985).

RESULTS AND DISCUSSION

Projections from the model suggest a continuing long-term decline in approximate accord with the trend of the female population index. Other questions have been studied with the model. For example, restoring litter size to the level observed before closure of the garbage dumps has about the same impact on population trend as increasing adult female survival by 2 percentage points or reducing adult female mortality by roughly one bear per year (Knight and Eberhardt 1985). We believe adult female mortality is the key issue in maintaining the grizzly bear population of Yellowstone National Park. In fact, the likely difference between earlier years, when the population was stable or possibly increasing, and the present situation may amount to an added mortality of one or two fully adult females per year.

Very likely the population before dump closures was somewhat larger than that used to initiate the simulations. Craighead et al. (1974) and a National Academy of Sciences committee (Natl. Acad. Sci. 1974) estimated an average total population on the order of 230 bears. An estimate of about 300 bears appeared in subsequent correspondence and is cited by McCullough (1981) and Cole (1976), but unfortunately has never been documented to our knowledge. The average observed composition data (Craighead et al. 1974, Table 1) gave 43.6% adults, whereas 53.7% of the adults observed in the field (Craighead et al. 1974:6) were females. One might thus suppose that there were about 230(0.436)(0.537) = 54 adult females in the population. Records of "unduplicated" females with cubs kept during 9 years of the present study average 12 such individuals per year. Since the interval between litters is a little more than 3 years, we propose that a likely minimum recent number of adult females may be just under 40 bears.

Further analysis of the available data is needed in an effort to refine these estimates. However, the management implications seem reasonably clear whether one

Table 1. Recorded mortalities of adult female grizzly bears in Yellowstone National Park and environs. All mortalities listed here were confirmed by retrieval of a carcass, with the exception of three denoted as "probable," for which there was strong presumptive evidence of death.

Year	Age	Location	Cause of death
1983	12	Gardiner, Mont.	Control
	6 (cubs)	W. Yellowstone, Mont.	Control
1982	Adult	YNP[a]	Research
	Adult	SNF	Shot by black bear hunter
	16	Cooke City, Mont.	Control
	Adult (yearlings)	TNF	Shot by hunter
1981	25	YNP	Old age and malnutrition
	10–12	GNF	Charged bird hunter
	22	GNF	Shot
	9	GNF	Unknown
	Adult (cubs)	BTNF	Shot (probable)
1980	Adult (cubs)	GNF	Killed by hunter
1979	10	YNP	Research
	Adult	GNF	Charged hunter (probable)
1978	Adult	GNF	Road kill
1977	10–12 (cubs)	YNP	Road kill
	Adult (cubs)	BTNF	Killed by outfitter
	Adult (cubs)	SNF	Shot (probable)
	5	TNF	Shot from residence
	Adult (yearlings)	SNF	Livestock related (?)
	6–8 (cubs)	SNF	Poacher
1976	11 (cubs)	YNP	Control
1975	Adult	TNF	Control, sheep depredation
1974	16	YNP	Control
	6	SNF	Legal harvest
	8	SNF	Legal harvest
	Adult	BTNF	Unknown
1973	22	YNP	Road kill (?)
	6	GNF	Control
	7	SNF	Legal harvest
	19	SNF	Legal harvest

[a] YNP = Yellowstone National Park, BTNF = Bridger Teton National Forest, GNF = Gallatin National Forest, SNF = Shoshone National Forest, TNF = Targhee National Forest. "Yearlings" or "cubs" after age of bear indicates that bear was accompanied by yearlings or cubs at time of death.

assumes a population of 40 or 50 adult female bears. Present evidence (Fig. 1) indicates a continuing decline in numbers, with an annual mortality of prime-age adult females of about 8%, or three to four such bears each year. Our earlier simulations (Knight and Eberhardt 1985) suggested that reducing mortality of prime-age females to about 5%/year (two or three bears) might permit the population to stabilize. Consequently, the margin between continuing decline and population stability is not likely to be much more than one or two bears per year. We emphasize that this calculation pertains to total losses, which will exceed the recorded mortality. The record of the observed female mortality over the course of the present study (Table 1) thus supports the notion of a continuing decline.

Some calculations (Knight and Eberhardt 1985) suggest that roughly half of the actual mortalities may have been recorded in the 1959–70 period. During the course of the present study, 13 adult bears died with active radios. Five (38%) of these mortalities were located without use of the radio transmitter. Table 1 lists 31 mortalities in 11 years, or 2.82 recorded mortalities/year. If we assume an actual average population of 50 adult females and an annual mortality rate of 10% (based on a weighted average of estimated annual survival of all adult females as reported by Knight and Eberhardt [1985, Table 6]), then the fraction recorded is 2.82/5 = 0.56. If the recent populations average 40 adult females, then we have 70% reported (2.82/4). Undoubtedly the fraction recorded will vary substantially with cause of death and age of bear, and chance has a major influence on year-to-year fluctuations. Nonetheless, a useful guideline would appear to be that a record of an average loss of one or two adult females per year might suggest that the population could stabilize. The observed losses of four or more adult females per year (Table 1) clearly cannot be sustained. The difficulties in reducing losses can be appreciated from the diversity of causes of death recorded in Table 1.

We emphasize that the course of events described here is a projection and not a prediction. Forecasting future abundance requires assessment of any actions taken to reduce interactions between man and grizzlies, along with the prospects of increased human activities in occupied habitats. Possibly a decreasing population would eventually be stabilized through a "refuge" effect due to the sizable protected area that is occupied by grizzlies. The uncertainty here lies in the very large areas used annually by individual bears, as demonstrated by radiotelemetry data, combined with the fact that the occupied area contains various corridors and enclaves of existing and increasing prospects of man–bear interactions. Inherent regulatory ("density-dependent") mechanisms within the population might also be expected to influence trends. We believe that dispersal of subadult bears is a key feature in this process, again leading to the need to evaluate the "refuge" issue. Our telemetry data suggest that the dispersal process largely amounts to extensive, random wanderings over long time intervals. Unfortunately, the areas unoccupied by other bears that also have good food supplies often turn out to be occupied by humans.

Acknowledgments.—This research was supported by the Natl. Park Serv., U.S. Fish and Wildl. Serv., U.S. For. Serv., Wyo. Game and Fish Dep., Mont. Dep. of Fish, Wildl., and Parks, and Idaho Dep. of Fish and Game. Participation of the junior author was supported by U.S. Dep. of Energy Contract DE-AC06-76RLO-1830.

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BEFORE THE HOUSE INTERIOR COMMITTEE
SUBCOMMITTEES ON NATIONAL PARKS AND
INSULAR AFFAIRS AND PUBLIC LANDS
October 24, 1985

Mr. Chairman and Members of the Subcommittees:

My name is Mary Wright. I live in Helena, Montana and I represent the Montana Council of Trout Unlimited. TU is a national fishing conservation organization with about 40,000 members. The Montana Council of TU is Montana's statewide governing body for 11 chapters and about 1100 members. TU's primary objective is the preservation and enhancement of habitat and water quality in America's coldwater fisheries.

Montana is blessed with an abundance of rivers that sustain vital coldwater wild trout fisheries. These fisheries are economically and aesthetically very important to Montanans.

Yet these rivers and the fisheries they support are constantly threatened. Downstream, water quality and quantity are diminished annually, primarily by agricultural use for irrigation. Upstream, they are threatened by the practices we are balking about today - mining, road building, logging, and grazing in the national forests - when these activities are not conducted in ways that protect the integrity of the watersheds. Partly because of downstream demands on our rivers, and partly because of the inherent need for good upstream watershed management, what happens to these rivers and their tributaries in the Park and the national forests surrounding the Park is crucial.

The headwaters of every major river system in the United States can be found on the Yellowstone Plateau. Montana TU is primarily concerned with three great rivers that originate in the Park and receive tributaries from the Gallatin and the Beaverhead National Forests. These are the Madison, the Gallatin, and the Yellowstone, the longest free-flowing river in the U.S.

The economic value to Montanans of the trout fisheries in these 3 rivers is enormous. A very conservative 1983 study concluded that direct spending by non-resident sport fishermen in 1982 was about $24,000,000. That does not include the multiplier to gauge the true economic value of the direct spending. Another study about the same time showed that sport fishing on the Madison River alone contributed $15,000,000 to the economy of Southwestern Montana.

Montanans value these rivers for their aesthetic and recreational value as well. And so do people from outside Montana. Ninety percent of the angler days on the Madison River involve non-residents.

Let's talk for a moment about the trout that live in these rivers. Trout are migratory. Typically, they begin their life cycle in the headwaters or in tributaries to the rivers. The fish eventually migrate to the mainstem river, and return to headwaters or tributaries to spawn over the gravel beds of the stream bottom.

When human activity disrupts the integrity of the watershed, erosion increases and sediment ends up in the streams. The sediment eventually precipitates out and begins to cover the gravel beds that the trout need for spawning.

At first, the trout will spawn anyway, but the eggs they lay will not survive because the sediment starves them of oxygen. Eventually, though, the habitat is lost for spawning. The trout will compete with each other for the remaining spawning habitat, and less spawning will take place. This, together with egg loss due to oxygen deprivation, means that fewer young will be produced and fewer trout will reach the mainstem river.

And that is not all that happens. The sediments also starve aquatic insects that provide a major food source for trout. The extreme of this process is a sterile, lifeless stream. When that happens, the human activity has benefitted very few people, and has caused a great loss for all of us.

Mr. Chairman, our organization is not here today to oppose all logging, road building, mining and grazing in the national forests. We strongly believe, however, that they must be planned and conducted in a way that will preserve our common resources. That is not being done now.

There is fragmented decision-making. The agencies have different objectives that may or may not be consistent with our concerns about fisheries. Another problem is that the plans for managing the forests are forest-specific. They simply do not take into account their downstream effects on water quality or on trout spawning and rearing habitat, effects that cross their political boundaries.

Because of these concerns, Montana Trout Unlimited urges that the land management decision-making agencies in the areas surrounding Yellowstone Park observe high and consistent standards both for the protection of the Park and for the protection of our downstream resources.

P. O. Box 52
Bozeman, Montana 59715

August 14, 1985

Mr. Robert Breazeale, Supervisor
Gallatin National Forest
P. O. Box 130
Bozeman, MT 59771

RE: Comments on the Proposed Gallatin National Forest Plan

Dear Mr. Breazeale:

The Madison-Gallatin Chapter of Trout Unlimited is pleased to have an opportunity to submit comment on the proposed Gallatin National Forest Plan. You will recall that several of our members represented the Chapter from time to time on the Advisory Committee to your planning program. We are grateful, too, for that invitation to participate in the planning process, but the proposed Gallatin National Forest Plan now before us indicates that our previous recommendations have had virtually no influence on the Plan. Now with a specific plan to focus on, however, we again offer commentary and recommendations. It should be emphasized that they are results of a committee working on behalf of the entire Chapter; therefore, the following remarks carry the full force of our 340+ membership.

Of major importance to Trout Unlimited is the fact that the Gallatin National Forest is the headwaters of the Madison, Gallatin, and Yellowstone Rivers which are three of the most significant "Blue Ribbon" trout streams in the State of Montana and the United States. We also acknowledge that sport fishing is only one of the many recreational values of the Forest. It is our conclusion, based on our review of your Plan and accompanying data, that when all forms of recreation are considered in total it is apparent that the top priority for management of the Forest must be recreation.

It distresses us, however, that your Plan is heavily slanted toward timber harvest. While it attempts to describe the Forest as a recreational forest, the economic thrust is obviously to manage for timber. Management should be prioritized for recreation with timber and livestock management used as tools to enhance the recreation values. We feel that this is the single most serious flaw in the Plan and that it is of such magnitude as to warrant major redrafting of the Plan and further consideration of other possible alternatives.

The following comments expand upon our observations with regard to Forest economics and values, and they cite other specific concerns we have.

Forest Economics and Values

The Draft Environmental Impact Statement (DEIS) and the Proposed Gallatin National Forest Plan (PFP) do not adequately address or call attention to the outstanding economical significance of the sport fishery, of other recreational uses and of non-commodity resources of the Gallatin National Forest. A comparison of some of the various data in the DEIS and PFP reveals some strong biases within the Forest Service.

Analysis of the 1980 data appearing on Page B-46 of the DEIS shows that, exclusive of the $6,851,000 income associated with Forest operations, 81% of the $31,526,000 in total income attributed to outputs of forest activities and 88% of the total employment are generated by recreational non-commodity outputs. The remaining 19% of total income and 12% of the total employment are generated by commodity-related activities.

On Page III-5 the data reveal that tourism and associated trade industries grew at an average annual rate of almost 10% between 1970 and 1978. At present approximately 17% of every dollar spent on tourism in Montana (i.e., 1 out of 6) is spent in Gallatin, Park and eastern Madison Counties. What isn't stated is that Montana Travel Promotion Bureau data reveal these tourism dollars for 1983 to be $323,000,000 for the state or $53.8 million for Gallatin, Park and eastern Madison Counties. It would appear that the economic impact of tourism in our area has been grossly understated by the Forest Service.

An analysis of the DEIS and PFP as they relate to Forest Receipts (Returns) and Forest Expenditures (Costs) is quite revealing. Page I-1 of the PFP lists by Program Activity Expense the average annual budgeted expenditures for the first decade as being $6,327,000. Page II-111 of the DEIS lists for Alternative #7 (the preferred Alternative) total "Returns to the U.S. Treasury," i.e. cash receipts by the U.S. Treasury, of $905,000. Stated another way this says that the Forest Service is going to spend $7.00 dollars for every $1.00 of income to the U.S. Treasury. That's a total U.S. taxpayer subsidy of $5,422,000 per year for 10 years!

This $54 million 10-year subsidy does not accrue proportionally to the commodity and non-commodity activities as measured by their outputs (i.e., total income and jobs per DEIS, Page B-46). Quite the contrary, a maximum of 23% of the PFP budget is allocated for non-commodity expenditures (See attached Appendix "A"). So while non-commodity activities (recreation, wildlife, etc.) are responsible for 81% of the Forest output in terms of total income and 88% of total jobs, only 23% of the PFP budgeted funds are allocated to these non-commodity activities. This disproportionate allocation of funds must be changed to approximate more closely the relationships that exist between the commodity and non-commodity activities and their respective various economic forest outputs.

The "Present Value" data for the PFP presented on Pages II-112 and II-113 would seem to further support TU's claim that not only historical but proposed budget allocations are skewed in favor of commodity-oriented activities. The data reveal that "Recreation/Wildlife" contribute 81% of the total average annual "Present Value Benefits" for the forest. The contribution from "Timber" is 15%.

On the cost side of the ledger "Recreation/Wildlife" account for only 12% of the total "Present Value Costs" while "Timber and Roads" account for 45% of the costs.

The estimated "Benefit/Cost Ratio" for Alternative #7 (PFP) is stated as 2.7 for the combined total of all activities. What isn't stated is that the B/C ratio for "Recreation/Wildlife" is 18.0 while it is 0.7 for "Timber/Roads." Stated another way -- "Recreation/Wildlife" estimated benefits are 18 times greater than their costs while "Timber/Roads" benefits are less than their costs.

Economic Value and Significance of Sport Fishing

The Plan does not discuss or acknowledge the economic significance of Southwestern Montana's sport fishing which exists because of streams originating on the Gallatin National Forest. As stated previously, the Forest is headwaters for three of the most significant Blue Ribbon trout streams in the United States. The Plan briefly mentions these streams, but it does not consider the responsibility of the Forest for water quality and quantity or for recruitment of young fish to these rivers.

A number of studies have been done on fishing economics in this area. In 1982-83 the Madison-Gallatin Chapter coordinated a project, contracted with the Statistical Center at Montana State University, that resulted in a report titled "Survey of the Economic Impact of Non-Resident Anglers in Montana: 1982 Season." This survey indicated that, on average, the individual non-resident angler spent $217.76 in Montana. This amount is a very conservative figure; most people associated with tourism and the sport fishing business claim it to be low. Using that figure, nevertheless, and multiplying it by fishing license sales of 100,000 for 1982 plus another 10% of sales in a combined license category, yields a total of $23,953,600. Moreover, if we apply the generally accepted Montana State Economic Multiplier of 2.71 (i.e. $23,953,600 x 2.71), the result is $64,914,256 for 1982. Even a cursory review of the sites visited by the respondents to the questionnaires mailed out during the survey will reveal that the Madison, Gallatin, Yellowstone, Beaverhead, and Big Hole Rivers are responsible for most of the non-resident angler revenue reported.

As part of the Madison River Thermal Study (1983), Blue Ribbons of the Big Sky Country Areawide Planning Organization (Blue Ribbons) performed an economic analysis of the sport fishery. When extrapolated for the entire Madison River, these data suggest that sport fishing on the Madison contributes about $15,000,000 annually to the economy of southwestern Montana. Additionally, a report entitled "The Net Economic Value of Cold and Warm Water Fishing in Idaho" (USFS; USFWS 1984) identifies fishing as a significant recreational value.

The DEIS on Page III-13 identifies 214,000 RVD's of use to fishermen on the Forest. The PFP on Page V-14 projects this pressure to increase by 175% by the year 2030. Yet the DEIS on Pages II-30 and II-61 projects a decrease in the numbers of catchable trout for the PFP. In light of the high recreational value of the Forest and the projected increase in fishing use, it is not reasonable or justifiable to propose a Plan that results in a decrease in numbers of trout.

Fisheries are widely recognized as a very valuable resource, one that requires minimal custodial management to produce optimum return. Their natural unmanaged state cannot be improved upon. We contend that 1) any below-cost management of commodity resources must demonstrate in advance that it will not damage other established in-place resource values and 2) any activity levels that diminish fisheries values cannot be justified for a below-cost timber sale.

Water Quality

We are also concerned about increased sedimentation of our high value trout streams. The proposed roading, logging, and grazing in the PFP are not uniformly dispersed across the Forest; they are concentrated in specific drainages. We do not believe that increased sediment yields should be calculated forest-wide as the Plan does. The Blue Ribbons Water Quality Management Study (1979) indicates that sediment production varies dramatically from drainage to drainage due to different geologic and soil regimes found on the Forest.

Your preferred Alternative in the PFP will increase total sediment production on the Forest by 3.8% per decade or over 20% during the planning period. This would result in significant deterioration of water quality and fish habitat in our Blue Ribbon streams.

Fishery Concerns

We question the proposed use of habitat improvement structures to mitigate fishery damages resulting from forest activities. The effectiveness of such structures in increasing fish numbers in high gradient, mountain streams is disputed by many local fishery professionals. Even if this form of mitigation were effective, we question the logic of attempting to increase habitat for adult and juvenile fish when the impacts of forest activities will primarily stem from increased sediment deposition on spawning and food-producing areas. If decreased spawning habitat and food supply become limiting factors, it is doubtful that an increase in adult habitat will compensate for these losses.

The assumption that fishing pressure on the Forest will continue to increase is a foregone conclusion. Yet the preferred alternative proposes to manage for somewhat fewer trout than presently exist on the Forest, and, further, proposes to utilize unproven fishery management practices that could fail to meet even this short-sighted objective. Fish increases rather than decreases should be the goal of Forest managers. Achieving this goal is dependent upon the development of a responsible Forest management plan that does not damage existing fish habitat and thus decrease fishing opportunities. We support such an alternative.

Stronger guidelines and standards (pg. II-21) are needed if the Forest's efforts to manage and protect stream fisheries are to succeed. We support the adoption of the following:

1. Provide for the needs of the fishery resource both on the Forest and in those streams off the Forest that are influenced by management activities. Coordinate fisheries needs with other management activities, with fisheries and watershed protection given first priority.

2. No activity that could potentially affect fish shall occur until adequate pre-impact baseline data have been collected and a monitoring program developed to measure post-activity impacts. No activity shall occur until funds and manpower have been allocated to administer such a monitoring and data collection program.

3. If impacts should occur, further developmental activities in the affected stream drainage shall cease immediately.

4. Mitigation of negative impacts on fisheries shall be primarily accomplished by closing to development those undeveloped drainages that have fisheries similar to those originally found in the developed drainages.

5. In drainages already developed, additional developmental activities shall not occur until the effects of past developments on the fisheries have been evaluated. If deleterious impacts have occurred, no additional development shall be allowed and past impacts shall be fully mitigated.

Riparian Concerns

The health and well-being of fish and other wildlife is dependent upon the proper management of riparian zones. The Plan recognizes this responsibility by proposing as its first management goal for these areas to "Manage the riparian resource to protect the soil, water, vegetation, fish, and wildlife dependent upon it" (pg. III-22). However, this commitment is not reflected in the standards and guidelines beginning on Page III-22. We recommend the following additions:

1. The establishment of a 100 ft. wide buffer zone along all Forest streams. Logging, mining and roading within these zones would be prohibited. Road crossings of streams would be allowed under strict guidelines.

2. The establishment of a comprehensive riparian management program that includes the close monitoring of all Forest activities potentially impacting riparian habitat, the collection of both pre- and post-impact data, and the fencing of overused and sensitive riparian areas.

In light of the proposed forest-wide 15% increase in livestock grazing and the absence of any guarantee that a riparian management program, if adopted, would be funded into the future, we question the ability of forest managers to meet the objective "To manage the riparian resource to protect the soil, water, vegetation, fish, and wildlife dependent upon it."

We recommend that no activity that could potentially impact riparian habitat be allowed until a comprehensive riparian management program is developed and funded.

Special Management Areas

Special fisheries and watershed management areas are needed to aid the recovery from past land abuses and to protect sensitive drainages and critical fish habitats. The following areas should be designated for special management:

1. Shields River drainage.

   Special watershed protection is needed to aid the recovery from past logging and roading excesses. The Shields River presently suffers from severe channel instability and sediment deposition.

2. Taylor Fork drainage.

   A high sediment producer that turns the Gallatin River chalky gray after heavy rains. Activities having the potential to increase sediment yields should not be allowed in this sensitive drainage. We support your commitment to manage this drainage for this purpose.

3. Sage Creek drainage.

   A highly sensitive drainage having the potential to produce a high sediment yield if disturbed. This area should be included in the Taylor Fork management plan.

4. Hebgen Lake tributaries.

   These streams provide important spawning and rearing habitats for the wild trout population of Hebgen Lake. Activities that could potentially impact these crucial habitats should not be allowed.

5. Tom Miner, Cedar, Mol Heron, Bear and Rock Creek drainages.

   These Yellowstone River tributaries support resident populations and/or provide crucial spawning habitat for the Yellowstone cutthroat trout, a "species of special concern" in Montana. Genetically pure Yellowstone cutthroat populations are presently found in only 8% of their original stream range in Montana. Management activities in these drainages should focus on protecting the remaining cutthroat habitat.

6. West Fork Gallatin River, Spanish Creek and Squaw Creek drainages.

   These Gallatin River tributaries have high fishery values. Additional developments within these drainages should occur only if the fishery can be fully protected.

Conclusion

Trout Unlimited--the Madison-Gallatin Chapter of TU in particular--regards the fisheries in question here as well as others in Southwestern Montana as a national public trust to which we have pledged ourselves fervently as stewards. Both this role of stewardship and the nationally acclaimed longterm value of these wild trout fisheries do and must transcend any parochial and short-term considerations of the resources of the Forest. It is imperative, therefore, that an acceptable Forest plan not only acknowledge these values from the national perspective, but also act positively on this acknowledgement. Economics and expenses/revenues data--the common and most persuasive language of bureaucrats--have been used perversely and offensively in the proposed Plan. To underestimate our commitment to work for and promote sound and business-like management of the resources of the

Gallatin National Forest would be a serious tactical error. We assure you that we are ready to discuss these comments or related matters and that we shall welcome the opportunity to continue in a partnership that will yield the kind of management plan that the Gallatin National Forest deserves.

Sincerely,

Fred Nelson
President, Madison-Gallatin Chapter
of Trout Unlimited

cc: Madison-Gallatin Chapter of Trout Unlimited Board of Directors and general membership.

Pam McClelland, Resource Director, Trout Unlimited, Vienna, Virginia

APPENDIX "A"

NON COMMODITY
GALLATIN NATIONAL FOREST BUDGET MODELS

$ Amounts X 1000 (1984 Dollars) Percent = % Total Forest Budget
E = Estimated A = Actual PFP = Proposed Forest Plan

FUND ID #	Description	1983 A	1984 A	1985 E	1986 E	1987 E	1988 E	1989 E	1990 E	ALT#7 PFP
09	Recreation	463 6.3%	571 8.0%	559 8.7%	597 8.1%	660 8.8%	727 9.4%	779 10.1%	862 10.9%	867 9.9%
10	Wildlife & Fish	189 2.6%	258 3.6%	214 3.3%	261 3.5%	275 3.7%	317 4.1%	343 4.4%	369 4.6%	375 4.3%
11	Soil & Water	110 1.5%	128 1.8%	115 1.8%	128 1.7%	139 1.8%	152 2.0%	165 2.1%	165 2.1%	180 2.0%
16	Landline Location (Partial)	21 0.3%	30 0.4%	33 0.5%	0 0.0%	26 0.3%	27 0.4%	31 0.4%	34 0.4%	35 0.4%
17	Road Maintenance (Partial)	24 0.3%	29 0.4%	29 0.5%	0 0.0%	30 0.4%	30 0.4%	30 0.4%	30 0.4%	33 0.4%
18	Trail Maintenance	179 2.5%	174 2.4%	173 2.7%	203 2.8%	206 2.7%	215 2.8%	240 3.1%	240 3.0%	233 2.6%
19	Coop Law Enforce	30 0.4%	28 0.4%	31 0.5%	25 0.3%	27 0.4%	29 0.4%	31 0.4%	34 0.4%	36 0.4%
33	Const.Rec.Facilities	78 1.1%	5 0.1%	2 .0%	27 0.4%	51 0.7%	50 0.6%	68 0.9%	86 1.1%	45 0.5%
35	Const.Engr.Support	62 0.8%	56 0.8%	50 0.8%	90 1.2%	58 0.8%	58 0.8%	58 0.7%	58 0.7%	60 0.7%
37	Const. Trails	0 0.0%	41 0.6%	66 1.0%	66 0.9%	64 0.8%	69 0.9%	75 1.0%	80 1.0%	109 1.2%
	Other	40 0.5%	38 0.5%	41 0.6%	54 0.7%	55 0.7%	57 0.7%	57 0.7%	58 0.7%	60 0.7%
Total Above Items (Non-Commodity)		1196 16.4%	1358 19.0%	1313 20.4%	1451 19.7%	1591 21.1%	1731 22.5%	1877 24.2%	2016 25.4%	2033 23.1%
Total Forest Budget		7300 100.0%	7154 100.0%	6437 100.0%	7358 100.0%	7532 100.0%	7700 100.0%	7745 100.0%	7940 100.0%	8795 100.0%
Total Commod.Budg.		6104 83.6%	5796 81.0%	5124 79.6%	5907 80.3%	5941 78.9%	5969 77.5%	5868 75.8%	5924 74.6%	6762 76.9%

only copy
please return

To: The House Subcommittee on Public Lands, U.S. House
of Representatives

From: Tony Povilitis, Ph.D., Wildlife Biologist, Director,
Campaign for Yellowstone's Bears, P.O. Box 416,
Boulder, CO 80306; (303) 444-5824

Re: Grizzly Bear Conservation in the Yellowstone Ecosystem

Date: October 24, 1985

My name is Dr. Tony Povilitis. I am a professional biologist and I direct Campaign for Yellowstone's Bears, a grass-roots organization based in Boulder, Colorado.

The quality of the Yellowstone area, as a natural ecosystem, can be gauged in part by the status of our large, top-of-the-food-chain species, particularly the grey wolf and the grizzly bear. Since few wolves, and no viable wolf packs, are known to occur in Yellowstone, my comments here concern the grizzly bear.

Over the past three years, I have thoroughly examined available biological information regarding the grizzly bear in Yellowstone National Park and surrounding public lands. I offer my findings to this Subcommittee along with a strong recommendation for the formal designation of critical habitat for this species in Yellowstone.

My findings are detailed in recent petitions to the Office of Endangered Species, requesting endangered status for the Yellowstone grizzly bear and official designation of its critical habitat under the Endangered Species Act. I am providing you with copies of these petitions as part of my testimony today.

In brief, the biological evidence indicates that the Yellowstone grizzly bear population, presently numbering about 200 as compared with estimates of 245 to 301 in the 1960s, continues to decline or, at best, is marginally stable.

Current levels of human use of grizzly bear habitat precipitate excessive bear mortality through unauthorized killings and agency control actions. Anticipated increases in land development in the Yellowstone area would further reduce chances for grizzly bear recovery.

Saving the grizzly bear requires drawing the line on human encroachment into bear habitat. And it is this fact that urgently needs to be addressed in a candid and direct way.

My proposal for critical habitat is based on that recommended by Dr. John Craighead, who, together with his brother Frank, pioneered grizzly bear studies in Yellowstone for over a decade. It recognizes the spacial needs of the grizzly bear, yet allows for human use of grizzly bear habitat. Most importantly, as with any critical habitat designation, it would require that activities financed or authorized by federal agencies be planned and managed in a way so as to ensure the recovery of the grizzly. Currently, the bottom line for agency actions is to avoid jeopardizing its continued existence.

The technical knowledge needed to determine appropriate kinds and levels of human activity and development within critical grizzly bear habitat is available. It is now a matter of using this knowledge in order to provide the grizzly bear with adequate protection. I have recommended a specific study to accomplish this task, and I am providing you with a copy of my recent correspondance with the National Park Service on this matter.

In conclusion, the proposed designation of critical habitat will benefit the grizzly bear and other large, wide-ranging wildlife as well. It would be fully consistent with the current Grizzly Bear Recovery Plan (FWS), which calls for recommending critical grizzly bear habitat for Yellowstone. Considering that the grizzly bear was listed as threatened in the American West over ten years ago, and that its status in Yellowstone has not improved, a critical-habitat designation for the grizzly bear in the Yellowstone ecosystem is fully warranted at this time.

I greatly appreciate this opportunity to comment. Thank you.

A Petition to Reclassify the Yellowstone Grizzly Bear from Threatened to Endangered

Petitioner: Dr. Tony Povilitis, Wildlife Biologist,
Director, Campaign for Yellowstone's Bears

Signature:

Address: 970 9th Street, Boulder, CO 80302

Telephone:(303) 444-5824; 444-2787

Submitted to: Office of Endangered Species, Fish and Wildlife Service, U.S.D.I., Washington, D.C. 20240

Date: July 31, 1985

I formally request that the grizzly bear (*Ursus arctos horribilis*) of the Yellowstone area, which includes Yellowstone National Park, Grand Teton National Park, and portions of five adjoining national forests (Knight and Eberhardt 1985) be reclassified from its current status as "threatened" to "endangered" under the Endangered Species Act. My reasons for making this request are based on the following considerations:

1. Current Status

A. Population Size and Trend

Grizzly bears in the Yellowstone area have diminished in number from estimates of 245 to 301 in the 1960s to about 200 today (Craighead et al. 1974; Cole 1976; Knight et al. 1983a). As few as 32 adult females were in the population in 1980 (Knight et al. 1983a). Based on *current* population parameters, the number of adult females can be expected to fall below 20 within the next 15-30 years (Knight and Eberhardt 1985), leaving an overall population of under 100 bears

B. Nutrition and Reproduction

Grizzly bears captured during 1975-82 averaged smaller and lighter than those captured during 1959-70 (Knight et al. 1983b). Mean litter sizes were 1.9 and 2.2, respectively, for the same periods. Age at production of first litter averaged one year later during 1975-82 than during 1959-70. These changes were apparently related to decreased nutritional conditions after garbage dump closures in Yellowstone National Park (1968-70).

C. Spacial Requirements

Total home range sizes of grizzly bears in the Yellowstone area since 1973 have averaged 874 sq. km (range: 368-1463 sq. km.) for adult females and 1970 sq. km. (range: 754-3238 sq. km.) for adult males (Knight et al. 1984). Home range sizes of adult females and males have increased 7.5 and 2.5 times, respectively, since 1959-70, indicating that the available foraging opportunities are now more widely dispersed. Individual bears are using very substantial portions of the roughly 20,000 sq. km. of the Yellowstone area.

D. Mortality

It may be possible to preserve the Yellowstone grizzly bear at the lower nutritional level and with its greater spacial requirement, but only if mortality is compensatingly reduced. However, data show that at present this is not the case. In comparing the 1959-70 period with recent years (1974-82), survival of bears to age 6 *decreased* from about 38% to 23%, and annual survival rates for prime-age adult bears *decreased* from about 96% to about 92% (Knight and Eberhardt 1984). Excessive grizzly bear mortality is generally recognized to be the primary immediate cause of the decline of the Yellowstone grizzly bear.

E. Geographic Isolation

Of perhaps 800 grizzly bears remaining in the American West, most live along the northern continental divide of Montana or in the Yellowstone area. Remnant populations are also believed to occur in 1) the Cabinet-Yaak ecosystem of north-west Montana and north-east Idaho; 2) the Selkirk Mountains of Washington and Idaho; 3) the north Cascades of Washington; and possibily 4) the Selway-Bitterroot ecosystem of Montana and Idaho (U.S. Fish and Wildlife Service 1982). These four populations may no longer be viable since they most probably include under 50 animals in each case (Shaffer and Samson 1985).

The distance between the Yellowstone area and other grizzly bear areas exceeds 150 (airline) miles. Because of surrounding agricultural and ranching land as well as sizeable urban communities, it is highly unlikely that an interchange of grizzly bears between Yellowstone and other grizzly bear ecosystems occurs (U.S. Fish and Wildlife Service 1982). The Yellowstone grizzly population represents a distinct population segment of *U. a. horribilis*, one that is considered essential to overall conservation of the grizzly bear in western North America (U.S. Fish and Wildlife Service 1982).

2. Threats to the Yellowstone Grizzly Bear

A. Human-induced Mortality

Based on Interagency Grizzly Bear Study Team and National Park Service data, at least 66 of 78 (85%) fully-documented cases of grizzly bear mortality for 1975-84 were human induced. Of these, 31 (47%) resulted from unauthorized shootings, 20 (30%) from agency control actions, 11 (17%) from management or research accidents, and 4 (6%) from road kills.

Of the unauthorized kills, 11 were attributable to hunters, 3 to outfitters, 2 to sheepherders, 4 to poachers, and 11 to unclassified persons. The killings took place largely (90%) on the national forests surrounding Yellowstone Park.

Of the control actions, 10 (50%) occurred at eight distinct locations in Yellowstone National Park, 6 (30%) on national forests, and 4 (20%) in the towns of Cooke City, Gardiner, andWest Yellowstone.

Management and research accidents resulting in grizzly deaths occurred in Yellowstone Park (5), on national forests (3) and in towns (3).

The difficulties in reducing grizzly bear mortality can be appreciated from the diversity of causes and locations of death as indicated here. Data on mortality of adult female grizzly bears further suggest the improbability of adequately controlling grizzly bear mortality in coming years.

In 1980-84, the recorded mortality (including bears removed from Yellowstone but not killed) of adult females was 15, or 3.0 individuals/year (Table 1). This figure is up from 2.2 adult female mortalities/year for the previous five years (1975-79). If reducing known cases of adult female mortality to 1-2/year might stablize the population (Knight and Eberhardt 1984), a goal of less than one such mortality/year seems needed to ensure population recovery.

Human-induced mortalities among adult females during 1980-84 were 7 killings by private citizens, 3 management removals, and 2 accidents resulting from bear research and management. For recovery to have begun in 1980-84, only 1 adult female death from these causes would have been acceptable, assuming natural and unknown deaths were unpreventable. Given the many opportunities for bear-human conflict in the Yellowstone area, it would have been incredibly difficult to have eliminated the others.

Table 1. Recorded mortalities of grizzly bears in the Yellowstone area, 1980-84. Figures include probable deaths for which there was strong presumptive evidence.

Year	Adult females	All bears
1980	2	17 (10 probable)
1981	5 (1 probable)	13 (3 probable)
1982	4	17
1983	2	6
1984	2	10
Total	15	63

B. Habitat Loss

Human encroachment into grizzly bear habitat is probably the principal reason for the decline of the Yellowstone grizzly bear. The use of grizzly bear habitat for hunting, livestock grazing, and a range of other activities carries with it an inevitability that a certain number of bears will be killed without authorization.

Likewise, the presence of recreational resorts, camping areas, energy development and mining, roads, towns, subdivisions, and other permanent or semi-permanent structures in grizzly bear habitat ensures that a number of bears will become food conditioned or habituated to people, making their removal necessary. While pre-disposing bears to human-induced mortality, such developments may also destroy or make unavailable to bears areas for foraging, travel, denning, and other essential activities.

Grizzly bear management relies heavily on law enforcement and public education to prevent the killing of bears and the mishandling of food and garbage. However, it appears unlikely that such measures can bring grizzly bear mortality down to an acceptable level in the Yellowstone area unless the problem of habitat encroachment is addressed in an effective and comprehensive manner. Despite intensified law enforcement and grizzly bear management efforts for the Yellowstone area in 1983-84 (Jackson 1984), at least three grizzly bears were illegally killed while 12 died from management actions.

Any comprehensive analysis of the risk posed to the grizzly bear by various human activities and developments in the Yellowstone area is beyond the scope of this petition. However, a request to the National Park Service for a study has been made (T. Povilitis, letter to W.P. Mott, Director, NPS, 9 May 1985). At present, there appears to be no definite basis for determining the kinds and levels of human activity in the Yellowstone area that are compatible with the grizzly bear, and consequently little likelihood that the problem of habitat encroachment can be solved.

Since increases in human activity and development in the Yellowstone area are likely (Greater Yellowstone Coalition 1984; see also Forest Plans for the Gallatin, Targhee, Bridger-Teton, and Shoshone National Forests, and the attached letter to R.D. Barbee, Superintendent, Yellowstone National Park, 27 July 1985), an accelerated decline in the grizzly bear population may be expected.

C. Other Threats

The viability of the Yellowstone grizzly bear population could also be further reduced by decreased genetic diversity with diminished population size, natural catastrophes, or an unfavorable change in climate. Within the last three decades, the climate in the Yellowstone area has progressively warmed and dried (Knight et al. 1984). Climatic influences are believed to account in part for reduced reproduction in the grizzly bear in recent years (Knight and Eberhardt 1985).

In summary and conclusion, the grizzly bear population of Yellowstone, now numbering about 200 individuals, has undergone a significant decline since the 1960s. The spacial requirements of this insular population appear to have increased, making conflicts between bears and people more likely. Human-induced mortality of grizzly bears is well above a level which would permit conservation of this species. As current policies promote a wide range of land uses in grizzly bear habitat, a continued or accelerated population decline can be anticipated. The Yellowstone grizzly bear should therefore be reclassified as "endangered."

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Errata Sheet for:

A Petition to Reclassify the Yellowstone Grizzly Bear from Threatened to Endangered. Dated July 31, 1985

Petitioner: Dr. Tony Povilitis, 970 9th Street, Boulder, CO 80302

Page 3 -- Paragraph 6, lines 1-3 should read:

> In 1980-84, the recorded mortality (including bears removed from Yellowstone but not killed) of adult females was 14, or 2.8 individuals/yr (Table 1).

Page 3 -- Paragraph 7, lines 4-5 should read:

> For recovery to have begun in 1980-84, only 2 adult female deaths from these causes would have been acceptable. . .

Page 4 -- Table 1 should read:

Year	Adult females	all bears
1980	1	9 (2 probable)
1981	5 (1 probable)	13 (3 probable)
1982	4	17
1983	2	6
1984	2	10
Total	14	55

Sept. 28, 1985

A Petition to Designate Critical Habitat for the Grizzly Bear in the Yellowstone Ecosystem

Petitioner: Dr. Tony Povilitis, Wildlife Biologist,
Director, Campaign for Yellowstone's Bears

Signature:

Address: P.O. Box 416, Boulder, CO 80306

Telephone: (303) 444-5824

Submitted to: Office of Endangered Species, Fish and
Wildlife Service (FWS), U.S.D.I.,
Washington, D.C. 20240

Date: October 10, 1985

I formally request that critical habitat for the grizzly bear (*Ursus arctos horribilis*) be designated for the Yellowstone ecosystem, which includes Yellowstone National Park, Grand Teton National Park, and portions of five adjoining national forests. In addition, I petition that this be done in general accordance with Dr. J. Craighead's "A Proposed Delineation of Critical Grizzly Bear Habitat in the Yellowstone Region," a copy of which is attached. Dr. Craighead's article addresses the need for a broad designation of critical habitat, one which recognizes the spacial requirements of grizzly bears, their integrated use of habitat and habitat resources, and the high degree of competition between them and man. In this sense, the delineation of critical habitat recommended here is conservative, since average home range size for the grizzly bear has increased considerably since the 1960s (Knight, Mattson, and Blanchard 1984).

Within critical habitat, the kinds and levels of human activity and development that are compatible with grizzly bear recovery can be determined through the Cumulative Effects Analysis Process (U.S. Forest Service n.d.) in combination with site-specific studies of human impacts on the grizzly bear. Likewise, for economic reasons, enclaves of non-critical habitat may be designated within the proposed critical habitat framework if such study clearly shows that grizzly bear recovery can be assured in the Yellowstone ecosystem regardless of the negative effect that these may have locally on the grizzly bear.

The principal reasoning behind this petition is as follows: The federal agencies responsible for land management in the Yellowstone area need to know what is critical grizzly bear habitat if they are to avoid its destruction or adverse modification, as required under law.

For the grizzly bear, the bottom line for decisionmaking by these agencies at present is whether a given human activity or development may jeopardize the continued *existence* of the species. This is not satisfactory. Major land uses should also be formally evaluated in terms of whether or not they jeopardize the *recovery* of the grizzly bear. A clear delineation of critical grizzly bear habitat would greatly assist federal agencies in carrying out their responsibility. In addition, the American public would be provided with a better understanding of the ecological needs of the grizzly bear, while especially concerned citizens or organizations could better evaluate progress in safeguarding grizzly bear habitat (ltr. to R.A. Jantzen from A. Povilitis, July 10, 1985).

The Office of Endangered Species has expressed some doubt as to whether additional benefits to the Yellowstone grizzly bear would result from a formal critical habitat designation, suggesting that the agencies are already aware of the biological needs of the grizzly bear (ltr. to A. Povilitis from J. Spinks, Aug. 5, 1985). However, I have found through my efforts on behalf of the Yellowstone grizzly bear that there is no clear understanding or consistent agreement as to what these needs are. I cite two examples here, the first relating to the new Grant Village development in Yellowstone National Park and the second to the proposed Ski Yellowstone development on the Gallatin National Forest.

The Grant Village development is situated over or immediately adjacent to a number of Yellowstone cutthroat trout spawning streams that are used by grizzlies. The Development Concept Plan/Environmental Assessment (DCP/EA) for Grant Village stated that protection of these spawning streams is important " . . because the streamsare critical bear habitat during the May/June spawning run." Therefore, blockage of these streams to discourage bears from using the Grant Village site may not be legal, even though the DCP/EA suggests such action as a possible mitigative measure. This concern was also expressed in the FWS Biological Opinion of 1979 on Grant Village.

Perhaps more significantly, the concept of critical habitat may have been misinterpreted in this case. Spawning streams as componants of grizzly bear habitat cannot, in and of themselves, constitute "habitat" for the grizzly. Critical habitat means areas on which are found the full range of physical and biological features essential to the conservation of the grizzly bear, with "conservation" referring to the restoration of the species to a point where protection under the Endangered Species Act is no longer required. Given available data on grizzly bear ecology in Yellowstone, and considering previous proposed critical habitat by FWS and by Dr Craighead, the entire Grant Village site may in fact fall within critical grizzly bear habitat

The proposed Ski Yellowstone development, according to Interagency Grizzly Bear Study Team (IGST) data, would be located in an area that receives heavy use by grizzly bears. The Forest Service, supported by a FWS Biological Opinion, has indicated that this development will not jeopardize the continued existence of the Yellowstone grizzly bear. However, National Park Service biologists of the IGST and a number of private biologists suggest that critical habitat may be involved, particularly in connection with the grizzly bear's ability to use the area without suffering excessive man-caused mortality (Knight and Blanchard 1984; Reid 1984). Indeed, there has been a long-standing difference of opinion among agencies as to how much of the proposed Ski Yellowstone site is critical habitat for the grizzly bear (Meierotto 1977). Moreover, the site was included in the FWS critical habitat proposal of 1976.

In conclusion, the designation of critical habitat for the Yellowstone grizzly bear,in a manner described in this petition, will be beneficial to the conservation of the species, as intended by Congress. This action would be fully consistent with the 1982 Grizzly Bear Recovery Plan of FWS, which called for recommending critical grizzly bear habitat for Yellowstone. Considering that the grizzly bear was listed as threatened in the American West over 10 years ago and that its status in Yellowstone has since deteriorated (Povilitis 1985), a critical-habitat designation for the grizzly bear in the Yellowstone area is fully warranted at this time.

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Campaign for Yellowstone's Bears
P.O. Box 416
Boulder, CO 80306

August 27, 1985

Mr. Stanley P. ~~Albught~~ Albright
Acting Director
U.S. Department of the Interior
National Park Service
P.O. Box 37127
Washington, D.C. 20013-7127

Dear Mr Albught:

Thank you for your letter of August 20, 1985 informing us that the National Park Service (NPS) and cooperating agencies are conducting a comprehensive study of the impact of all human activities and developments on the Yellowstone grizzly bear. Campaign for Yellowstone's Bears (CYB) is very encouraged by this news.

When submitting CYB's request for such a study (letters to NPS Director W.P. Mott, May 9 and June 26, 1985), I was aware of the Cumulative Effects Analysis Process (CEAP) and its potential value, in combination with site-specific studies, for determining the kinds and levels of land use that are compatible with grizzly bear conservation in Yellowstone. However, it was unclear to me at that time as to whether the NPS and other agencies would, as a matter of policy, use the process accordingly.

Your letter assures us that they intend to apply CEAP over the entire Yellowstone ecosystem and that, for biological and legal reasons, such action is considered essential to the recovery of the grizzly bear.

You indicate that the CEAP concept was unanimously agreed upon by the NPS, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the wildlife departments of Idaho, Montana, and Wyoming. I would appreciate receiving specific reference(s) to that agreement and copies of relevant interagency correspondance.

We regard this news as a major policy development that could ultimately ensure the recovery of the Yellowstone grizzly bear. At the same time, it has far reaching significance for the management of public lands in the Yellowstone ecosystem. Given that human-induced mortality of grizzly bears is well in excess of population recovery levels and that increased human activity in grizzly bear habitat is currently anticipated, some hard decisions will have to be made soon as to what specifically can and cannot be allowed on Yellowstone's public lands.

I am certain that the NPS would agree that CEAP can be successful only if there is general political agreement as to its value and use for preserving the grizzly bear and helping to maintain the overall biological integrity of the Yellowstone ecosystem. Without such aggreement, plans to use CEAP as an effective decisionmaking tool may well suffer the same political fate as have plans to remove facilities from prime grizzly bear habitat at Fishing Bridge in Yellowstone National Park.

Therefore, CYB would like to recommend that:

1. Members of Congress, interested organizations, and the general public be fully informed of the ongoing study and the reasons as to why it is essential. In this regard, the NPS might consider publishing this information in the Federal Register.

2. CEAP and other elements of the study be submitted for independant technical review and validation. Reviews could be solicited from organizations such as the Wildlife Society, Wildlife-Wildlands Institute, Great Bear Foundation, and CYB.

3. Federal agencies agree that, until the study is completed, irreversible actions (such as the construction of new recreational sites, roads, etc.) be avoided in grizzly bear habitat. In particular, the U.S. Forest Service should consider this need before finalizing Forest Plans and associated Environmental Impact Statements for the Gallatin, Targhee, Bridger-Teton, Shoshone, and Custer National Forests.

4. A definite timetable be set for testing CEAP, completing the study, and applying its results. Unless the problem of habitat preservation for the grizzly bear is solved soon, any reasonable chance for its recovery in Yellowstone may be lost.

We appreciate this opportunity to offer suggestions regarding the study of human impacts on the grizzly bear in Yellowstone, and look forward to your response to them. The study and its full application may eventually rank as the single most significant act to preserve the grizzly bear in our American West.

Sincerely,

Tony Povilitis

Tony Povilitis, Ph.D
Director, CYB

cc William Penn Mott, NPS Director, w/ copy Albught ltr.
Senator Gary Hart w/ copy Albught ltr.
Senator Paul Simon w/ copy Albught ltr.
Congressman Timothy Wirth w/ copy Albught ltr.
Yellowstone 2000 Committee w/ copy Albught ltr.

JOHN F. SEIBERLING
14th District, Ohio

Committees:
JUDICIARY
INTERIOR AND
INSULAR AFFAIRS

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Oct. 25, 1985

Dear Congressman Seiberling,

I am very thankful for having had the opportunity to discuss the Yellowstone grizzly bear at yesterday's hearing. As I didn't have additional copies of my testimony and documentation at the time, I am attaching these here.

Also, I include a list of grizzly bear mortalities, 1975-85. The Forest Service's statement that mortality has declined over the last 2-3 years is clearly in error.

At the Hearing, I only regret not having emphasized more the need for official critical habitat designation for the grizzly. The attached petition discusses this need.

Finally, I have four recommendations for getting the most from the Cumulative Effects Analysis Process. These are listed on page 2 of my Aug. 27 letter to Mr. Stanley Albright, Acting Director of NPS., a copy of which is also attached.

I am hopeful that the Hearing's results will help the wonderful Yellowstone area.

Sincerely,
Tony Povilitis
Director
Campaign for Yellowstone's
Bears

THIS STATIONERY PRINTED ON PAPER MADE WITH RECYCLED FIBERS

BEST COPY

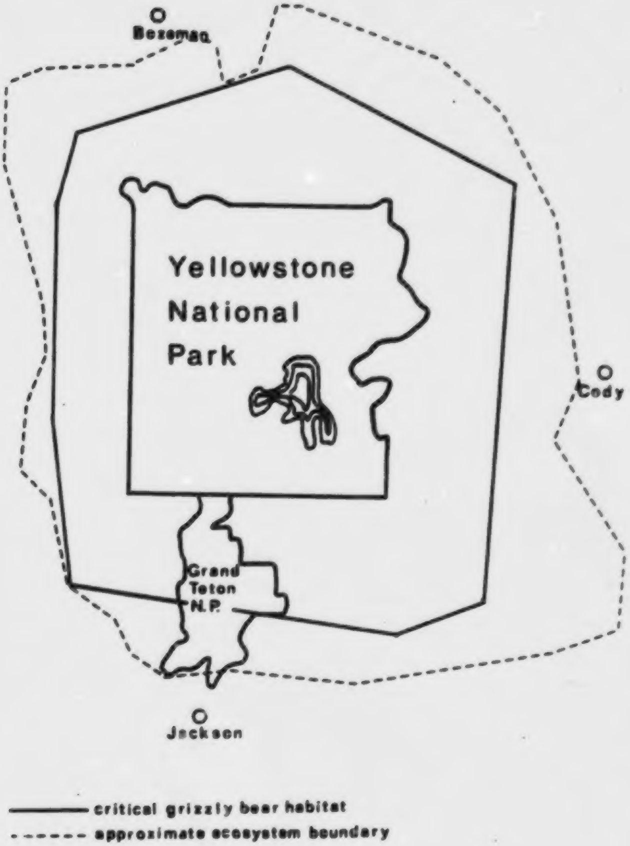
Mortality of Grizzly Bears in the Yellowstone Ecosystem, 1975-85

	Man-Caused	Total Recorded
1985 (to 9/30)	7	13
1984	9	10
1983	6	6
1982	14	17
1981	10	13
1980	5	9
1979	9	9
1978	7	7
1977	12	14
1976	5	6
1975	3	3

Figures are from the Interagency Grizzly Bear Study, NPS, Bozeman, MT.

APPENDIX A YELLOWSTONE ECOSYSTEM

Proposed critical grizzly bear habitat


Bozeman
Yellowstone National Park
Cody
Grand Teton N.P.
Jackson
critical grizzly bear habitat
approximate ecosystem boundary

STATEMENT OF THE WESTERN REGIONAL COUNCIL

SUBMITTED TO THE
SUBCOMMITTEE ON PUBLIC LANDS
AND THE
SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION
HOUSE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

JOINT HEARING ON GREATER YELLOWSTONE ECOSYSTEM

OCTOBER 24, 1985

Members of the Subcommittee:

I am John Arlidge, Vice President of Nevada Power Company. I am submitting this statement as Chairman of the Western Regional Council Park Protection ad hoc Committee.

The Western Regional Council (WRC) is an organization of the chief executive and chief operating officers of 43 companies engaged in a broad variety of business activities in the Western United States. The WRC represents financial, mining, utility, investment, construction, transportation, accounting, oil and gas, engineering and other business enterprises. One of the primary purposes of the Council is to establish a balanced viewpoint between the need for a safe and clean environment in which to live and the need for a healthy and active economy in our region.

Western Regional Council members are good neighbors with many of this nation's largest and most beautiful national parks. We enjoy their unmatched beauty and grandeur and have learned to respect them for their significance as national treasures. We appreciate them for the opportunities they provide, for the aesthetic and recreational enjoyment of the people and we recognize their contributions, both direct and indirect, to the economies of surrounding states and localities. We are sincerely interested in their protection and preservation.

We also understand that the geologic, climatic and other natural forces that created many of the features that typify national parks in the West also created or made accessible many of the natural resources that are critical to our nation and its people. WRC members have become good neighbors to parks while making available or developing such resources as oil and gas, coal, water, minerals, etc.

For these and other reasons we feel that we have a unique perspective on and understanding of the numerous, large national park system units located in the Western United States, including Yellowstone National Park. We appreciate the opportunity to share this perspective at this hearing.

We are particularly interested in the protection and preservation of Yellowstone National Park, the "flagship" of our National Park System. Yellowstone, our oldest national park, was established on March 1, 1872 by an act of Congress. It is our largest national park, including 2.2 million acres, making it larger than some states. Yellowstone National Park is one of our most popular national parks as almost 2.5 million people visit the Park annually.

Yellowstone National Park encompasses a variety of scenery, wildlife and natural features. Among the most famous, of course, is the Old Faithful geyser. Others include the hot springs, trout streams, Yellowstone Falls, thermal pools, Yellowstone Lake, grizzly bear, elk, moose, bison, and Yellowstone's expansive backcountry.

In our written statement, we will address the protection of Yellowstone and the Park's resources by outlining some of the principles behind our park protection position and applying them to the specific facts and circumstances of Yellowstone National Park.

Case-by-Case Approach

The Western Regional Council believes that Congress and the Administration should adopt a case-by-case approach to address any problems facing national park system units, rather than uniform, system-wide "solutions". A case-by-case approach facilitates consideration of factors unique to each park. By focusing on a specific problem confronting an individual park, a solution can be developed and implemented that will maximize protection of the park resource while minimizing unintended, negative impacts on non-park activities. Such an approach can also preclude the need for broad, system-wide "solutions" that are, by their nature, either too broad to effectively deal with the challenges faced by a specific park, or too narrow to address the problems that may confront 334 diverse park system units.

The WRC hopes this joint hearing focusing on the specific needs of Yellowstone National Park represents an endorsement of just such a case-by-case approach by Congress to park problems. The Council notes that this Congress has indicated it is capable of taking such a case-by-case approach by addressing other specific park concerns this year. Without commenting on the merits of the particular concerns or problems raised or solutions proposed, we do note that this Congress has considered the following:

--H.R. 1185 (House Report 99-30; S. 488) expanding the boundary of the Petrified Forest National Park in Arizona to include a 40 acre archeological site. The tract contains an unmapped pre-Columbia ruin containing a 30-to-50 room pueblo, ceremonial dance area and remains of pottery believed to date back to the years A.D. 1600 and 1100. The site was inhabited by the Anasazi culture that dominated the Four Corners region of Utah, Colorado, New Mexico and Arizona from 800 to 1400. The 40-acre expansion is intended, in part, to assist state and federal attempts to crack down on looters who take the ancient civilization's pottery and other artifacts. The Petrified Forest, established in 1906 to preserve trees that have changed into mulitcolored stone, was designated a national park in 1962 and contains nearly 93,500 acres.

--H.R. 934 allowing the Interior Department to the use federal funds for erosion control measures on some of the 20,000 acres of privately owned land within Cuyahoga National Recreation Area in Ohio. Sponsored by Public Lands Subcommittee Chairman Seiberling, the bill is intended to help control erosion on federal and private holdings within the 32,000 acre national recreation area.

--H.R. 1390 to relieve overcrowding in Yosemite National Park in California by authorizing additional long-term leases in the El Portal administrative site adjacent to the Park.

--H.R. 105 to provide for inclusion of the Washington Square area within Independence National Historical Park.

--H.R. 2182 to authorize acquisition of the 230-acre Long Island, a sandy barrier island that is home to two bird species that are on Wisconsin's endangered species list, to add to the 20 Lake Superior islands that already comprise the Apostle Islands National Lakeshore in Wisconsin.

--S. 720 to establish for the first time a permanent boundary for the 69-year-old Arcadia National Park in Maine.

As previously noted, we hope that this hearing, focusing on the specific "natural, cultural and recreational resources, and their associated economic and environmental values," on the "potential conflicts between various resource uses," and on the existing "governmental arrangements now in place" to manage Yellowstone, represents a commitment by the Subcommittees to allow specific park problems to be addressed on a case-by-case basis.

In a recent meeting with executives of WRC member companies, National Park Service Director, William P. Mott, Jr., endorsed the case-by-case approach to solving problems or addressing concerns regarding units of the national park system. Such an approach is basic to the Director's 12-point management plan for national parks, as well as to the Administration's park protection working group recommendations.

The Western Regional Council agrees that when concerns are raised regarding negative impacts on national parks, they should be addressed on a specific case-by-case basis.

Fact Finding

One of the Western Regional Council's greatest concerns about the park protection debate, including the current discussion about Yellowstone National Park, is that the debate focus on actual research, facts and evidence and not be driven by unsubstantiated allegations or "threats," the private agenda of individuals or groups, or inaccurate summary statements or "desired" conclusions from various undocumented reports.

Many of the discussions in recent years about park protection have been based on the report, State of the Parks 1980--A Report to the Congress. While we certainly applauded the intentions of the Park Service, at that time, to attempt to inventory the national parks and the problems they faced, we were greatly disappointed in the product, particularly its lack of factual documentation and evidence. As noted in the "Dissenting Views" included in House Report No. 98-170, the Report was described as a "woefully inadequate and hastily-prepared document...." The "Views" continued:

> "The referenced document was an effort to assess park problems and impacts from both within and without the boundaries of park system units. Pressed for time,

> and lacking any local or state input, the National Park Service personnel produced a document without substantiation or explanation of their perceptions of existing and future problems facing the parks. Vague references, with no documentation or explanation, of such park problems as 'employee ignorance', 'increased oil and gas development outside the park', and 'drunkenness and vandalism', do not represent either the pinnacle of research efforts or an adequate point of reference from which the Congress should be expected to derive conclusions which ultimately lead to enactment of legislation."

In its announcement of this hearing, the Subcommittee Chairmen, Seiberling and Vento "stressed that the hearing is essentially a 'fact-finding' effort". The Western Regional Council commends the Public Lands Subcommittee and the Subcommittee on National Parks and Recreation, and Chairmen Seiberling and Vento, for attempting to focus this hearing towards "fact-finding", and for seeking to obtain specific facts and evidence regarding Yellowstone National Park.

Impacts vs. Threats

The Western Regional Council believes that in addressing concerns related to our national parks, our efforts should focus on actual impacts on park as opposed to threats.

We are concerned about the tendancy in the park protection debate of proponents of development moratoria around parks to speak in terms of "threats", without any meaningful documentation as to whether the "threat" actually exists and, even more importantly, without any determination as to whether the "threat" will actually have a serious adverse impact on the park.

Objective research or study will, we believe, establish that most alleged "threats" rarely, if ever, become actual impacts with adverse effects on parks or park resources. For example, recent articles in Western newspapers quoted sources alleging that mining projects outside Yellowstone National Park "threaten" the aquifer system in the Park. The articles mentioned unnamed scientists as postulating that Yellowstone's groundwater system is charged in the Gallatin Range, north of the Park. In fact, this is highly unlikely as the Park's geology, particularly the thermal areas, are of different origin and structure than the Gallatins. Earth movements within the Park are far more likely to cause fluctuations in thermal spring flows than any mining or drilling activitiy outside the Park. Furthermore, as far as tracing radioactive elements from the Gallatins to thermal springs in the Park, hot springs are well known to produce radioactive elements and many other deposits--traced to their source of heat. In fact, precious metals are produced from hot springs deposits.

A careful analysis, focusing on facts, actual research and evidence of many of the alleged "threats" to parks, including numerous threats outlined in the 1980 State of the Parks

Report, would probably result in the same conclusion--that the so-called "threat" does not and will not negatively impact park resources.

Clearly, the mere existence of a resource exploration or development activity on lands around or adjacent to national parks does not automatically either threaten or negatively impact the park or its resources, particularly with the significant protections and restrictions of existing laws, regulations and other authority.

We are concerned that the emotions surrounding the iteration of the so-called numerous threats to parks are actually counterproductive by diverting important resources from real problems and diverting sincere efforts from developing and implementing meaningful responses or solutions to negative park impacts. The Council believes the focus should move away from mere allegations of threats to actual established detrimental impacts from specific activities or sources on specific parks.

Internal Solutions

The Western Regional Council believes that in addressing actual park problems, Congress and the Administration should look first to "internal" solutions (i.e., actions that can be taken or measures that can be implemented under existing authority within the park, itself).

Yellowstone National Park provides a good example for this approach. Because of its attraction to tourists, Yellowstone typically receives more than two milion visitors each year, resulting in some deterioration of facilities at the Park and creating the need for rehabilitation and maintenance. In response to this concern, some sources suggested severe limitations on the number of visitors allowed in the Park each day, month and year. As an initial alternative to such visitor limitations, the Administration opted instead for an "internal" response, the Department's Park Restoration and Improvement Program (PRIP), with a greater emphasis on maintenance and rehabilitation.

Through 1983, PRIP expenditures for Yellowstone totalled $4.7 million for such projects as upgrading water and sewer systems, repairing unsafe boardwalks at viewing sites, rehabilitating historic structures, etc. In addition, approximately $34.6 million is being spent over a period of years to renovate concessioner facilities. The Park Service has also strengthened its concessioner activity, scientific research and park planning efforts. In our recent meeting with Director Mott, he announced a significant increase in the number and quality of park service scientific and research staff.

The concern about one of the most distinguishing "features" of Yellowstone National Park, the grizzly bear, provides another opportunity to utilize an internal response.

Over the years numerous proposals focusing specifically on the grizzly bear have been made. Concerns about human/bear contacts, survival of the grizzly bear and reports that the grizzly population was declining have been raised for several decades.

During this period of time numerous suggestions have been offered to address concerns about the grizzly bear. It is interesting to note that many of the suggestions that are supported by independent experts, wildlife biologists and others can be implemented under existing law and authority without negatively impacting activities outside the park.

Among the "internal" responses avilable include baiting, reopening selected dumpsites, and/or targeted supplemented feeding. In a statement for a hearing in Cody, Wyoming of the Senate Environmental Pollution Subcommittee, ecologist and grizzly bear reseracher Dr. Frank C. Craighead stated:

> "The concentration of grizzlies at food sources, such as dumps or at baits (animal carcasses), in areas where they are zoned away from people can do more to reduce bear/man confrontations, injuries and human death than any other single management procedure.
>
> Grizzlies are currently distributed throughout the ecosystem, some near campgrounds and others at the ecosystem peripheries. In both places they are vulnerable to official control actions, to poachers, hunters, and stockmen. Grizzly bear mortalities can be decreased by baiting these bears back into the center of Yellowstone National Park during summer and concentrating them in selected, isolated areas where

> contact with humans will be at a minimum. Baiting, the strategic placement of animal carcasses (or other food), is a tested and workable technique."

At the same hearing, the following comments of author Alston Chase were offered:

> "For these reasons, nearly all biologists working with Yellowstone grizzlies believe that saving the bears will almost require, among other things, a program of supplemental feeding to re-establish the Park as an ecocenter."

An advantage of exercising these options is they can be implemented under existing park authority, with the Park, without conflicting with other park, park-related, or adjacent activities.

Other available "internal" responses, include "sanitizing" campgrounds to reduce conflict, thorough investigation of casualties, trapping and releasing problem bears in remote areas, re-examining the fire-burning policy in parks to enhance the carrying capacity of the Park, etc.

There are, no doubt, other recommendations from grizzly bear researchers or experts that could be implemented within the Park to enhance the grizzly bear population without closing lands outside the Park to development activities. These should be carefully considered. The Western Regional Council does not necessarily endorse any one specific or combination of the aforementioned options. However, we must conclude that there are numerous reasonable options available to respond to concerns about the grizzly bear population without significantly impacting activities outside the Park.

Similarly, options to address other real problems or impacts facing Yellowstone can be implemented within the Park, itself. The WRC supports primary reliance on such internal measures to address park problems.

Existing Authority

In addressing park-related concerns, the Western Regional Council believes it is critcal to consider existing federal and state authority and actions taken pursuant to that authority.

In the news release announcing this hearing, Chairmen Seiberling and Vento emphasized that a signficant aspect of this hearing would focus on the "state and federal governmental arrangements now in place for managing the ecosystem and its resources." The Western Regional Council believes that existing arrangements and authority are currently addressing or are capable of addressing impacts on parks and park resources. We believe that neither additional authority, legislation nor formal designation of a Greater Yellowstone Ecosystem is necessary to adequately protect the Park.

It is impossible, within the time constraints and focus of this hearing to adequately detail all the existing federal authority, not including the numerous state programs, statutes and regulations, that currently provide protection to our national parks both internally and externally. Existing federal laws that provide protection to national parks and park resources both internally and externally, directly and indirectly, include the Clean Air Act, Clean Water Act, Endangered Species Act, Forest Reserve Act, Forest Service Organic Administration Act, Fish and Wildlife Act, Fish and Wildlife Coordination Act, National Wilderness Preservation System Act, National Environmental Policy Act, Environmental Quality Improvement Act, NEPA Amendments, National Forest Service Management Act, Federal Land Policy and Management Act, Federal Coal Leasing Act Amendments, Clean Air Act Amendments, Clean Water Act Amendments, Migratory Bird Treaty Act, Eagle Protection Act, Surface Mining Control and Reclamation Act, National Park Service Organic Act, etc. and special legislation applying to each national park. For example, one full volume of the United States Code Annotated and its supplement, containing 1,200 pages, sets forth the legal systems which already provide for the protection and management of the National Park System.

There are numerous specific examples where the implementation of these laws provides review of potential conflicts with parks and provides effective mitigation, control or other protective measures. In addition to the above listing of existing statutory authority, the Western Regional Council presents several specific examples which illustrate how park activities, including activities on lands outside parks, are addressed under current law.

-- The six national forests that comprise 60 percent of the Yellowstone area are completing projected 50-year management plans and environmental impact statements. The plans, due by December 31, were ordered under the 1976 National Forest Management Act. The management plans will take into account all aspects of the public's multi-use of the forests: wildlife, the watershed, grazing, timber harvesting, recreation, oil and gas exploration, etc.

-- One of our member companies is in the process of permitting an exploratory oil and gas well in an area outside Yellowstone National Park. Approval of the drilling operation is being sought from the Bureau of Land Management (BLM) through the process required by the National Environmental Policy Act (NEPA) and its regulations. This environmental review will be conducted by an independent third party under BLM's direction. Although the air pollution emissions from exploratory wells are negligible, air pollution, visibility impairment, and other air quality related concerns will be identified and addressed through the existing permitting process. In addition, other enviornmental and related concerns will be identified and addressed.

-- Another example where concerns about resource development activity impacts on parks have been addressed under existing law concerns an aluminum smelter located approximately nine miles from the southwestern end of Glacier National Park, Montana. During the early years of its operation, fluoride emissions from the aluminum reduction process raised concerns by park personnel regarding possible negative impacts on plant life in the park and surrounding area. After extensive research and expenditure of funds, the company was able to purchase a newly developed control process. $41 million was spent to retrofit the plant and install the new process which was put in place in 1981. The technology reduced fluoride emissions by 90% putting the plant in total compliance with stringent PSD requirements and resolving the concerns raised by the Park Service. Since 1981 the company has continued strict monitoring of air quality to the satisfaction of the Park Service.

-- A company's application to drill an exploratory well into the overthrust belt formation south of the Lewis and Clark National Forest and adjacent to both Glacier National Park and the Great Bear Wilderness Area was approved only after adequate safeguards, including permit stipulations specified in an environmental assessment, were planned to assure maintenance of air [illegible] water quality standards.

-- As a condition to approving an exploratory oil well near the campground at Hovenweep National Monument, the State of Utah required the company to take specific actions, including measures to mitigate the visual impacts on visitors to Hovenweep.

The Administration is currently instituting recommnmedations from a working group on park protection that are aimed at anticipating, avoiding and resolving resource conflicts. The WRC supports these recommendations and encourages Congress to give them an opportunity to work and not to take action to preempt them.

Summary

The WRC would like to reaffirm its strong opposition to the designation of the Yellowstone ecosystem with its additional restrictions on activites outside the Park. Such a proposal greatly exceeds that which is necessary to respond to legitimate concerns over negative impacts on park resources, would unnecessarily complicate efforts under current law and authority to prevent negative impacts on park resources, would preempt less dramatic but clearly effective management options in the Park, would establish an inappropriate precedent for dealing with allegations of external threats to parks, and would have unnecessary, but serious negative impacts on environmentally sound activities outside the boundaries of the Park.

On a related, but broader issue, the Council has also opposed any signfiicant system-wide expansion of Park Service authority over lands or activities outside parks. Instead, the Council endorses the management tools currently available inside parks, certain already existing provisions of law that provide protection against degradation of park resources and values from outside of parks, and the Administration's park protection working group recommendations. We should allow sufficient time to implement and test those recommendations before arbitrarily preempting them.

Conclusion

In conclusion, we would like to briefly review and summarize our statement.

First, the Congress and the Administration should use a case-by-case approach when considering concerns raised about parks and fashioning solutions.

Second, park protection should be in response to actual facts, research and evidence and not merely in response to unsubstantiated allegations.

Third, investigation of park concerns should focus on real impacts as opposed to alleged threats.

Fourth, in addressing park problems, Congress and the Administration should always look first to internal park solutions.

Fifth, existing federal and state authority is sufficient to address both internal and external "threats" to parks. Broad legislative solutions are neither necessary nor effective and can, in some instances, even be counterproductive to the interests of national parks.

We sincerely appreciate the interest of the Public Lands and the National Parks and Recreation Subcommittees in our national parks in the West and the opportunity to provide the Western Regional Council's unique western perspective to your review of the Yellowstone National Park and to park management and protection concepts in general. We will be pleased to respond to any related questions or provide additional information at your request.

JAMES S. RILEY
EXECUTIVE DIRECTOR
INTERMOUNTAIN FORESTRY SERVICES

I. INTRODUCTION

Good morning. I would like to thank Chairmen Vento and Seiberling and other members of the Subcommittees for inviting me to testify today. My name is James Riley. I am Executive Director of Intermountain Forestry Services (IFS). I am here today representing both IFS and the National Forest Products Association (NFPA).

Intermountain Forestry Services is a trade association representing forest products firms in Southern Idaho, Utah, Colorado, and Wyoming. A number of our members are dependent for their raw material supply upon the National Forests that comprise part of what is being referred to as the Greater Yellowstone Ecosystem.

NFPA is an association representing over 2,000 companies involved in manufacturing solid wood products. This industry provides over 700,000 direct jobs and many other indirect jobs. Many of NFPA's member companies are dependent, to some degree, upon the National Forests -- including those in the area of concern -- for their raw materials. In addition, NFPA member company facilities operate under Clean Water and Clean Air Act permits obtained from states and/or the Environmental Protection Agency (EPA).

Much of the discussion over threats to both Yellowstone National Park and the surrounding area reflects a concern that natural resources both within, but also outside, Yellowstone National Park are being threatened or degraded as a result of incompatible activities sanctioned, supported, or carried out by the federal government. These concerns, in turn, rest on an assumption that existing statutory and regulatory mechanisms for protecting resources in this area are currently inadequate.

We cannot share this assumption. In our view, existing mechanisms for the protection of resource values in this area are already provided through the requirements of the National

Environmental Policy Act of 1969 as amended, the National Forest Management Act of 1976, the Endangered Species Act of 1973 as amended, the Clean Water Act of 1977 as amended, the Clean Air Act of 1977, and a host of other existing statutory and regulatory provisions.

Each of the above-cited statutes contains specific requirements for the protection of special areas or resources. Indeed, the list of eighty-eight "Threats to Greater Yellowstone" prepared by the Yellowstone Coalition shows controlling "laws or regulations" for each of the "threats." Below, we will review the requirements of existing law most applicable to our activities. The next speaker on this panel will discuss specific Forest Service actions to respond to these requirements in the Yellowstone area.

II. THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The National Environmental Policy Act (NEPA) -- especially as it is currently being implemented through Executive Order 11991 -- provides an important mechanism to assure that public lands and resources contiguous to National Park or Wildlife Refuge System units are managed in a fashion that fully protects significant environmental values.

NEPA requires all federal agencies to develop Environmental Impact Statements (EISs) regarding major federal actions in order to protect and enhance environmental quality. Executive Order 11991 instructs the Council on Environmental Quality to: (1) monitor and evaluate all Environmental Impact Statements; (2) issue regulations for federal agency implementation of NEPA, with specific provisions for coordinating federal programs; and (3) assure appropriate interagency review of Environmental Impact Statements.

We have seen no evidence to suggest that either the Park Service or the Fish and Wildlife Service[1] are not being provided adequate opportunity, through their review of draft and final Environmental Impact Statements prepared by other federal agencies, to assure that resources in the Yellowstone area are being adequately protected. Certainly, nothing in the document describing the eighty-eight threats to the lands surrounding Yellowstone National Park provides such documentation. If the procedures for interagency review of EISs are deficient, they can be modified administratively without additional legislation.

III. THE NATIONAL FOREST MANAGEMENT ACT (NFMA)

As indicated above, our principal interest centers on the management of -- and the availability of adequate timber from -- public lands managed by the U.S. Forest Service. In this context, we believe that there is presently in place an orderly land management planning process instituted by the passage of the National Forest Management Act (NFMA). This process is designed to manage the resources found on individual units of the National Forest System efficiently and for multiple use objectives.

In managing national forest lands, the Forest Service is required by statute to give special consideration to aesthetic concerns, fish and wildlife resources, and ecological diversity. Specifically, Sections 6(g)(3)(A) and (B) of the National Forest Management Act require the Forest Service (in the development of land management plans) to provide for, "outdoor recreation (including wilderness), range, timber, watershed, wildlife, and fish." The Forest Service must also provide for, "diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple use objectives."

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[1] The Fish and Wildlife Coordination Act of 1964 requires even more specific and detailed consultation with the U.S. Fish and Wildlife Service.

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This specific statutory mandate has been translated by the Forest Service into extensive regulatory requirements governing the development of land management plans on each national forest. In particular, the Forest Service regulations at 36 CFR § 219.5(a) require that forest land management planning be conducted by inter-disciplinary teams which can integrate knowledge of the physical, biological, economic, and social sciences to achieve multiple use objectives. Section 219.5(a)(3) of the regulations specifically requires that the team "implementing the planning coordinate activities within the Forest Service and with local, state, and other federal agencies." Thus, both the Park Service and the Fish and Wildlife Service must be consulted when planning is being undertaken for Forest Service lands contiguous to units of: (1) the National Park System, such as Yellowstone or Grand Teton National Parks; or (2) the Red Rocks Lake National Wildlife Refuge or the National Elk Range. In addition, Section 219.6 provides extensive requirements for full public participation in the development of Forest Service land management plans.

Moreover, Section 219.7 of the Forest Service regulations imposes even more specific procedural requirements for participation by other federal, state, and local units of government in national forest planning by requiring Forest Service planners to:

(1) Give notice of the preparation of a land management plan to other federal agencies as specified in OMB Circular A-95 (36 CFR § 219.7(b)).

(2) Review the planning and land use policies of other federal agencies (e.g. National Park Service and U.S. Fish and Wildlife Service), and display the results of this review in the Environmental Impact Statement accompanying the Forest Service land management plan (36 CFR § 219.7(c)).

(3) Meet with representatives of other federal agencies, local governments, and Indian tribal governments at the beginning of the planning process to consider their concerns and develop procedures for coordination (36 CFR § 219.7 (d)).

(4) Seek input from other federal, state, and local governments to help resolve management concerns and identify areas where additional research is needed (36 CFR § 219.7(e)).

(5) Monitor the effects of national forest management on lands, resources, and communities adjacent to or near the national forest for which the plan is being developed (36 CFR § 219.7(f)).

Given this exhaustive list of requirements for coordination with other agencies -- including both the National Park Service and the Fish and Wildlife Service who are charged with managing the most sensitive lands in the Yellowstone area -- it is difficult to fathom how the Forest Service could do any more, unless the intent of the current debate is to set the basis of expanding the size of the National Park to include all public lands within the so-called, Greater Yellowstone Ecosystem.

Finally, in addition to the extensive interagency coordination requirements described above, Section 219.19 of the Forest Service regulations requires the Agency to give special consideration to fish and wildlife resources in the development of Forest Service land management plans. Section 219.19 specifically requires the Forest Service to provide sufficient habitat to maintain viable populations of existing native, and desired non-native, fish and wildlife species. Section 219.19(a)(3) also requires the Forest Service to consult with biologists from state fish and wildlife agencies and other federal agencies "in order to coordinate planning for fish and wildlife."

Based upon these requirements, we have conducted a detailed review of the National Forest plans for those national forests surrounding Yellowstone National Park. We have also reviewed the individual timber sales (nine in number) that were included in the list of threats to the ecosystem. The next witness on this panel will review our findings in these areas.

IV. THE ENDANGERED SPECIES ACT

As the Subcommittees know, the Forest Service and all other federal agencies are bound by the restrictions of Section 7 of the Endangered Species Act which prohibits any federal action that threatens the critical habitat of a listed endangered species. Consultation with the U.S. Fish and Wildlife Service is mandated in situations in which proposed federal activities might result in such a threat. The next witness will demonstrate that the Forest Service has carried-out this consultation in all of the proposed timber sales and national forest plans included in the Coalition's list of "threats."

Moreover, the most significant endangered species in the area of concern is the grizzly bear. Protection for the grizzly bear was recently enhanced by the May 28, 1985 "Interagency Guidelines on Management of Grizzly Bear" (50 Fed. Reg. 21696), published by the Bureau of Land Management, Fish and Wildlife Service, National Park Service, and Forest Service. These Guidelines "address recommended management actions relative to wildlife, timber, fire, range, recreation, mineral, watershed, and special uses." The Guidelines established protection requirements both on areas currently inhabited, and those likely to be inhabited, by the grizzly bear.

V. THE CLEAN WATER ACT

The Clean Water Act requires all discharges of pollutants into waters of the United States to obtain a permit from either the Environmental Protection Agency (in Idaho) or the state water quality agency (in Montana and Wyoming). The effluent standards governing the discharge for each permitted source are developed by EPA on an industry-by-industry basis.

Our members operate nine sawmills in the so-called, Greater Yellowstone Ecosystem. The effluent standards promulgated by EPA on January 16, 1975 for sawmills require these facilities to operate with "zero discharge" to the environment (40 CFR § 429.121).

Quite apart from, and beyond, EPA's effluent standards, the Clean Water Act requires states to develop water quality standards to protect ambient water quality from all pollution sources. EPA's regulations governing the fashion in which states develop their water quality standards require that:

> "Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected." (40 CFR § 131.12(a)(3)).

Thus, it is our view that existing statutory and regulatory mechanisms for protecting the Yellowstone area: (1) take cognizance of the ecological significance of the area's streams and lakes; and (2) provide appropriate environmental controls.

VI. THE CLEAN AIR ACT

Lands adjoining and inside national parks also are presently being well protected under the requirements of the Clean Air Act of 1977 and subsequent EPA regulations. In particular, the national Prevention of Significant Deterioration (PSD) review and permitting program mandated by Part C of the Act establishes specific numeric limits and ceilings for air pollution emissions in all existing "clean air" areas of the country. National parks, monuments, and wilderness areas generally receive the highest level of protection as mandatory "Class I" areas under the PSD program. National primitive areas, preserves, recreation areas, wild and scenic rivers, wildlife refuges, and national lakeshores and seashores greater than 10,000 acres in size cannot be classified as less than "Class II," which permits only moderate increases in air pollution levels.

In these areas, no new major air pollution emitting facility can be built, nor can any existing facility be expanded, in a way that would cause the statutory PSD limits and ceilings for these areas to be exceeded. EPA regulations require, moreover, that PSD permit reviews take into account visibility and other air quality-related values.

Section 169A of the Clean Air Act also contains a specific visibility protection program for mandatory federal Class I areas, including national parks over 6,000 acres in size. After several years of delay, the national visibility protection program now is in the process of being carried out through state implementation plan revisions. This program should be given a chance to work before any new legislation is considered to deal with air pollution-related aspects of protecting our national parks and surrounding areas.

VII. CONCLUSION

I will conclude by noting that, insofar as activities in the Yellowstone area are concerned, existing requirements provide appropriate protection of important natural resources. We appreciate the opportunity to offer our views on this issue. Should you so desire, we would be pleased to conduct a field tour for the Subcommittees' members and staff to observe and evaluate our timber management activities on both public and private lands in the vicinity of Yellowstone National Park. We stand ready to assist the Subcommittees further in any deliberations on this important matter.

MICHAEL C. WELLING
RESOURCE MANAGER
IDAHO FOREST INDUSTRIES, INC.

I. INTRODUCTION

Good morning. I would like to thank Chairmen Vento and Seiberling and the other members of the Subcommittees for inviting me to testify today. I am Mike Welling, Resource Manager for Idaho Forest Industries, Inc., headquartered in Coeur d'Alene, Idaho. Our company operates mills in Coeur d'Alene, Idaho, St. Anthony, Idaho, and Medford, Oregon.

Our St. Anthony, Idaho facility is eighty percent dependent upon timber from the Targhee National Forest which borders Yellowstone National Park on the West. An additional fifteen percent of our timber supply comes from the Beaverhead and Gallatin National Forests which are adjacent to the Park on the North.

Our mill is the only major industry in St. Anthony. It has a payroll of 100, with a number of dependent loggers and other operators. Obviously, any restriction of the timber supply from the national forests in the so-called Greater Yellowstone Ecosystem would have a substantial effect on our company and the town of St. Anthony.

As a purchaser of timber from these and other National Forests, I am familiar with the procedures the Forest Service uses to design, evaluate, and implement national forest timber sales. I am also aware of some of the procedures used to develop national forest plans. I have reviewed the supporting documents for the timber sales and forest plans identified in the first edition of the Threats Inventory released by the Greater Yellowstone Coalition. These documents clearly indicate that: (1) timber harvest decisions are made only after giving careful consideration to the impacts to non-timber resources; (2) timber harvest activities are designed to mitigate these impacts; and (3) the Forest Service undergoes an extensive review process to ensure that timber sale activities are compatible with the objectives of local, state, and other Federal agencies.

II. THE IMPACTS OF TIMBER SALES ARE GIVEN CAREFUL CONSIDERATION IN THE TIMBER SALE AND FOREST PLANNING PROCESSES.

While the concept that the area in and around Yellowstone National Park is a unique ecological unit is not new, the term "Greater Yellowstone Ecosystem" (GYE) is rather recent. A review of timber sales or forest planning documents will not show any references to the term. A careful review of those documents, however, will reveal that the resources which make the area unique *are* given careful consideration by the Forest Service. The impacts of forest management activities on grizzly bears, elk, pristine water, wilderness, recreation, scenic beauty, and other valuable resources are clearly identified and discussed.

A. Timber Sale Activities

Timber sales are designed under procedures which meet the requirements of the National Environmental Policy Act of 1969, as amended (NEPA). An Environmental Assessment (EA) is prepared to determine if the proposed timber sale will have a significant impact upon the natural or human environment. If a significant impact is anticipated, the Forest Service must preform a full Environmental Impact Statement (EIS) under the provisions of NEPA.

The EA process is complex and time consuming. An EA document is prepared which describes: (1) the proposal; (2) major public issues and management concerns; (3) alternatives considered; (4) mitigation measures; (5) the resources affected; (6) the environmental consequences of all the alternatives; and (7) the economics of the project. The EA is prepared by an interdisciplinary team (IDT) of natural resource specialists. The sales listed in the *Threats Inventory* were prepared by landscape architects, foresters, wildlife biologists, transportation engineers, range conservationists, soils scientists, fire specialists, and economists.

The interdisciplinary team usually meets several times to: (1) gather data about the relevant resources; (2) develop alternatives; (3) conduct an on-site review of the alternatives; (4) evaluate the alternatives; and (5) prepare the EA document. Our review of the timber sale EA's for the timber sale projects listed in the *Threats Inventory* shows that the various IDT teams spent a great deal of time inventorying and reviewing the resources which make the Yellowstone area unique. The analysis provided below of each timber sale identified as a "threat" will indicate those ecosystem values that were identified as important.

B. *Forest Planning*

The national forests adjoining Yellowstone National Park are currently in the process of preparing comprehensive forest plans which will guide management programs on these national forests for the next 10-15 years. Several of these plans are loosely described as "threats" in the Greater Yellowstone Coalition's *Threats Inventory*.

The national forest planning process was mandated by Congress in the National Forest Management Act of 1976 (NFMA). Its objective is to identify the mix of management practices that maximizes the net public benefits of national forest management, recognizing national goals and objectives, and anticipated environmental impacts, economic efficiency, existing policy and law, and public input. Some of the benefits considered include: (1) recreation values; (2) timber production; (3) grazing potential; (4) wilderness management; (5) mineral production; (6) water quality; (7) wildlife production; (8) species diversity; (9) endangered species recovery; and (10) visual quality. The NFMA forest planning process represents our nation's first attempt to develop a program of integrated management for all of these objectives within the context of a single comprehensive forest management plan.

The forest planning process is covered by the same NEPA requirements used to develop a timber sale EA: (1) an EIS is prepared which describes the proposal, the major public issues and management concerns, the alternatives considered, any mitigation measures, the resources affected, the environmental consequences of all the alternatives, and the economics of the project; (2) the EIS and forest plan are prepared by an interdisciplinary team of resource specialists; and (3) public involvement is a significant part of the process. The primary differences involve the scale of the inquiry and the level of detail in the analysis process.

Once finalized, the forest plans resulting from this process will replace the timber management plans currently in effect on the national forests adjoining Yellowstone National Park. Individual timber sales, and their associated environmental analyses, will be prepared within the context of the land allocations, management objectives, and management standards and guidelines described in the approved forest plans and their accompanying Environmental Impact Statements.

III. TIMBER SALE ACTIVITIES CONTAIN MITIGATION MEASURES DESIGNED TO PROTECT OR ENHANCE ECOSYSTEM RESOURCES.

The National Forests are managed under standards imposed by the Multiple-Use and Sustained-Yield Act of 1960 (MUSY) and the NFMA. Both of these laws require the Forest Service to provide for a variety of uses of public lands. For example, it has been mandated that:

> "It is the policy of Congress that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." (Section 1 - MUSY).

> "...The Secretary of Agriculture is authorized and directed to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of several products and services obtained therefrom." (Section 2 - MUSY).
>
> "In developing, maintaining, and revising plans for units of the National Forest System pursuant to this Section, the Secretary shall assure that such plans provide for multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use Sustained-Yield Act of 1960, and, in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness." (Section 6(e)(1) - NFMA).

In an effort to provide for multiple use of the national forests, the Forest Service often designs projects so that the negative impacts are minimized and the beneficial impacts are increased. These design parameters are included even though they may increase the cost of the project substantially.

A. Timber Sales

Timber sale projects often contain special activities designed to protect or enhance non-timber resources. Standard timber sale activities are often modified or carried out under standards designed to further accomplish these objectives. These activities and standards often result in extra costs -- either to the government or the purchaser. A recently-released study indicates that, because of the activities associated with protection of non-timber resources, purchasers' bids on seven national forests were reduced $26 (in 1980 dollars) on the average. This figure represents only federal revenues foregone. Direct Agency costs for protecting non-timber resources are not yet available.

Different methods are employed to protect or enhance different non-timber resources. The activities designed to protect grizzly bear habitat will serve as an example of the kinds of things the Forest Service does to protect other resources.

Grizzly bear habitat is sometimes protected by: (1) restricting timber harvest activities to a relatively short period of time during the summer; and (2) requiring operators to take special precautions to avoid contact with the bears. These kinds of provisions increase the purchasers' operating costs. The government also experiences extra costs due to grizzly bear protection. These extra costs result from: (1) limiting the acreage harvested in a given area; (2) preparing many small harvest units rather than fewer, larger ones; and (3) substandard or late regeneration of timber as a result of activities designed to increase bear forage.

Similar mitigation measures are used to protect or enhance elk habitat, water quality, visual quality, and range management. Some of the specific activities and standards designed to protect or produce non-timber resources will be discussed below.

B. Forest Planning

Forest plans are designed, by law, to recognize both the commodity and noncommodity resources of the national forests. Many areas will be managed exclusively for roadless recreation, wildlife habitat, old growth preservation, watershed protection, visual quality, and other non-timber values. Management prescriptions for these land allocations often impose significant limitations on timber harvest activities or prohibit them all together.

Even on those parts of the forest scheduled for intensive timber management, land management prescriptions are designed to mitigate the potential adverse impact of timber harvest activities on other resource values. These mitigation measures are usually included in forest plans as "minimum management requirements" or timber sale "standards and guidelines." Most national forests, for example, will limit the acreage of timber harvest allowable at any one time in a drainage to minimize impacts on water quality. Mitigation standards are also incorporated into road location and design decisions. For example, the Lolo National Forest in Montana estimated that these kinds of requirements can reduce the sediment potential from forest road construction by more than 90 percent. Similar mitigation measures are included to protect wildlife habitat, visual quality, and other non-timber values to the extent compatible with growing and harvesting timber in a reasonably cost-efficient manner.

IV. THE FOREST SERVICE COOPERATES CLOSELY WITH LOCAL, STATE, AND OTHER FEDERAL AGENCIES BEFORE UNDERTAKING ANY ACTION.

A. Timber Sales

As a matter of common practice, the Forest Service notifies local governments and state and other Federal agencies of proposed management activities. These groups, as well as various special interest groups, are encouraged to express their concerns about proposed actions, participate in public involvement activities, and comment on draft proposals.

It is impossible to quantify how much impact this consultation has on final decisions. However, it is our experience that, on the project level, these comments -- especially those of state fish and game agencies -- often result in significant changes to a timber sales proposal. Consultation activities specific to the nine timber sales listed as threats will be discussed below.

B. Forest Planning

Under the forest planning regulations implementing NFMA, the Forest Service is required to undertake an extensive review of the plans and policies of other Federal agencies, state and local governments, and Indian tribes (36 CFR § 219.7). After the review, the Forest Service is required to: (1) consider alternatives which would resolve conflicts; (2) meet with designated officials to develop coordination procedures; (3) identify research needs; and (4) consider the effects of national forest management on nearby lands, resources, and communities.

Again, it is not possible to quantify how much impact this consultation has on the final outcome of the national forest planning process. At this time, most of the forest plans for national forests adjacent to Yellowstone National Park (those plans listed in the Threats Inventory) are in the draft stage. When the final plans are issued, it will be possible to get some idea about what kind of impact those comments had on the final decision. Our review of other final plans does indicate that: (1) local, state, and other Federal agencies made extensive comments; and (2) these comments influenced final decisions.

V. REVIEW OF THE TIMBER SALES LISTED IN THE THREATS INVENTORY.

The first edition of the Threats Inventory includes nine national forest timber sales. The inventory sheets do not explain why these specific timber sales are included in the inventory. Our review of the timber sale EA documents reveals that: (1) on each sale, the impacts of the proposed action were taken into consideration; and (2) measures designed to mitigate the impacts of the sale were adopted. Each EA lists the parties consulted during the EA process. Below we will review each of the nine timber sales. I believe that these sales are designed to eliminate or minimize any long-term threats to the area's resources.

A. South Leigh Specialty Sale -- Targhee National Forest

The South Leigh Sale has not yet been offered for sale, nor has the preferred alternative been selected. We obtained the forest's working papers for this review.

The sale is designed to salvage between 400 and 500 acres of timber killed by the mountain pine bark beetle and spruce budworm. There are no threatened or endangered species within the sale area, and the sale is not adjacent to any wilderness areas. The major potential for detrimental impacts appears to be on big game winter range.

Two action alternatives have been developed. Both action alternatives include the following mitigation measures:

1. Manage all new roads as closed.
2. Protect wildlife snags and raptor nests.
3. Prevent snowmobile harassment of big game with a snowmobile closure if necessary.
4. Treat the aspen to benefit big game if possible.
5. Coordinate reforestation with grazing use.

Although the final decision has not been made, the working papers indicate that the sale should have no significant impact on the natural or human environment.

The Forest has consulted the following interests:

- Idaho Forest Industries, Inc.
- Bureau of Land Management
- Wyoming Game and Fish Commission
- Idaho Environmental Council
- Louisiana Pacific Corporation
- Greater Yellowstone Coalition
- Idaho Conservation League
- Star Studs
- Sierra Club
- Teton County and Wyoming County Commissioners

B. Commissary Ridge Timber Sale -- Targhee National Forest

The Commissary Ridge sale will salvage 1,058 acres of dead and dying timber in western Wyoming. There are no threatened or endangered species within the sale area. The major potential for negative impacts are to big game winter range habitat, and the visual quality looking out from the newly-created Jedediah Smith Wilderness Area.

Two action alternatives were evaluated along with a no action alternative. The preferred alternative that was selected offers a timber harvest level of only 65% of the other alternative. Both of the action alternatives contain the following mitigation measures:

1. Manage all new roads as closed.
2. Protect wildlife snags and raptor nests.
3. Prevent harassment of wildlife with a snowmobile closure if necessary.
4. Control the timing of harvest activities to minimize displacement of big game.

The preferred alternative was designed to avoid negative visual impacts from within the Jedediah Smith Wilderness Area by laying out the harvest units on the flatter ridges and manipulating the size and shape of the harvest units to emulate natural openings.

The Forest consulted with the following interests:

- Idaho Forest Industries, Inc.
- Louisiana-Pacific Corporation
- Idaho Conservation League

- Star Studs
- Sierra Club
- Teton Mountain Touring
- Teton County and Wyoming County Commissioners
- Wyoming Game and Fish Commission
- Teton Valley Skyliners Snowmobile Association
- Bureau of Land Management

C. Poacher's Trail Timber Sale -- Targhee National Forest

The Poacher's Trail Sale will salvage 340 acres of dead, dying, or diseased timber in western Wyoming. The sale area lies within Situation 2 grizzly bear habitat. Maintaining the production of huckleberry mast was identified as the major issue of the project. Elk habitat quality was identified as high.

Three action alternatives and a no action alternative were developed. The preferred alternative has the lowest timber harvest of the three action alternatives -- only about 69% of the highest alternative.

The following mitigation measures were applied to all alternatives:

1. Manage all new roads as closed.
2. Design cutting units to imitate natural openings in order to reduce the visual impacts from nearby proposed wilderness areas.
3. Implement restrictions on harvest activities in order to protect riparian areas.
4. The Greater Yellowstone Grizzly Bear Guidelines will be incorporated into the planning and administration of the sale.

In addition to the above mitigation measures, clearcuts for the preferred alternative were restricted to 10-40 acres. Regeneration activities were modified to insure that huckleberry production will remain high.

The IDT team states that the preferred alternative will have no significant negative impacts on the grizzly bear. Elk habitat quality will remain unchanged. Forage quality will increase in the long run. Mule deer and moose habitat will increase. Black bear and Great Grey Owl habitat quality will remain unchanged.

The Forest Service contacted the following interests:

- Edward Hines Lumber Company
- Louisiana-Pacific Corporation
- Idaho Environmental Council
- Wyoming Game and Fish Commission
- Sierra Club
- Idaho Conservation League
- Idaho Forest Industries, Inc.

D. The Eldridge Creek Timber Sale -- Gallatin National Forest.

The Eldridge Creek Sale was originally designed as a 4 MMBF unit of lodgepole pine at risk because of an insect infestation. The sale is located near Bozeman, Montana and is almost completely surrounded by roadless areas under consideration for wilderness.

The IDT team identified impacts to water quality, wildlife, habitat, visual appearance, recreation, soil conditions, range management, and wood production. The sale area is located in a grizzly bear Situation 1 management area.

Six action alternatives contain the following standards:

1. Do not harvest in areas with high visual management objectives.
2. Restrict harvest so that a favorable cover/forage ratio for moose and elk will be left.

3. Do not harvest in areas receiving high big game use.
4. Do not harvest in a drainage with a confirmed grizzly bear den.
5. Maintain cover above minimum levels for grizzly bears.
6. Restrict use of roads.

The EA states that: (1) the preferred alternative will not affect nearby proposed wilderness areas; and (2) there will be no long-term, negative impacts on wildlife -- including the grizzly bear. Short-term, negative impacts on a nearby guest ranch were anticipated.

After the impacts of the sale on the nearby guest ranch became an issue, certain provisions of the sale were changed to minimize the impacts on the ranch. Contract conditions now call for harvest in one year rather than the 3 years originally allowed. Logs will be hauled in the winter in order to avoid conflicts with recreation traffic. Some units were dropped from the sale. These changes cost the purchaser $26,000.

E. The Kersey-Fisher Timber Sale -- Gallatin National Forest.

The Kersey-Fisher Sale is still in the design stage. We have reviewed draft working papers for this sale.

Two action and two no action alternatives were developed. At this point, the working papers are not clear as to how many acres will be harvested in any final timber sale that is authorized. The mitigation measures, however. are clearly identified. Those pertaining to timber harvest include requirements that:

1. The timber sale should be designed to enhance cross-country skiing, snowmobiling, and hiking.
2. Visual quality objectives will be met.
3. Harvest units will be shaped to protect wildlife.
4. Some roads will be closed.
5. The Gallatin National Forest Grizzly Bear Management Guidelines will be applied.

The working papers indicate that none of the alternatives under consideration will result in permanent or significant detrimental impacts on the area's resources.

In addition to meeting with local area residents, the Forest Service has thus far consulted with:

- Montana Department of Fish, Wildlife, and Parks
- Greater Yellowstone Coalition
- National Audobon Society
- Interagency Grizzly Bear Task Force
- Yellowstone National Park

F. The Bacon Ridge Timber Sale -- Bridger-Teton National Forest

The Bacon Ridge Sale will offer for sale 1.5-2.0 MMBF of timber from approximately 134 acres in western Wyoming. Approximately 950 cords of firewood will be provided following timber harvest. There are no known threatened or endangered species on the project area.

Two action alternatives were evaluated along with the no action alternative. Both would harvest similar timber volumes. The primary differences involve harvest methods. Alternative B would involve 107 acres of shelterwood harvest and 56 acres of clearcut harvest on the first entry (163 acres total). The preferred alternative will involve 134 acres of smaller clearcuts with no shelterwood harvest.

The preferred alternative will emphasize protection of visual resources. Existing areas of roaded natural and semi-primitive motorized recreation opportunities will remain unchanged. Reduction of effective elk hiding cover will be "approximately the same" as Alternative B (about 0.1-0.2 percent). Wildlife concerns will be "adequately addressed" through mitigation measures.

The proposed action will include the following mitigation measures to protect non-timber resource values:

1. Restrict log hauling to dry road conditions.
2. Leave snags in cutting units for non-game.
3. Limit clearcuts to 26 acres with irregularly shaped design.
4. A wildlife biologist will participate in the sale layout to assure wildlife habitat needs.
5. Leave buffer zones adjacent to streams.
6. Winter logging is prohibited to avoid conflict with snowmobiles.
7. Stabilize temporary roads and cover with slash.

The no action alternative would allow insect and disease infestation to continue unchecked and result in the loss of 12 MBF/acre (virtually the entire stand) from the lodgepole pine component in the next 50 years.

The Forest has consulted the following interests:

- Sierra Club
- Wyoming Game and Fish Commission
- Teton, Fremont, and Sublette County Commissioners
- Wyoming Wood Products, Inc.
- Sweetwater County Wildlife Association
- Greater Yellowstone Coalition
- Upper Green River Cattlemen's Association
- Adjacent Landowners
- Dew Lumber Company

G. The North Baldy Timber Sale -- Bridger-Teton National Forest

The North Baldy Sale will harvest approximately 5.0 MMBF of timber in the Blackrock and Spread Creek drainages on the Bridger-Teton. Grizzly bears occasionally use the project area.

Three alternative actions were evaluated in addition to the no action alternative. The selected alternative proposes a timber harvest level of 33 percent below the highest alternative evaluated.

The Environmental Assessment Decision Notice states that: (1) construction of roads and harvesting of timber resources will have only slight adverse effects on the ecosystem; (2) there are no apparent adverse cumulative or secondary effects; and (3) the proposed action will have only minimal or no adverse impacts on known threatened or endangered animals or plants within the sale area.

The proposed action will include the following mitigation measures to protect non-timber resource values:

1. Make cutting units resemble natural openings.
2. Maintain elk migration corridors.
3. Maintain wildlife cover along roads.
4. Close roads when necessary for grizzly bear.
5. Institute plantation survival checks and gopher control.
6. Coordinate harvest activities with adjacent sales to minimize impact on big game.
7. Revegetate road cuts and fills for visual quality objectives.

8. Prohibit harvest activities after October 20 to minimize impacts on migrating elk.
9. Leave slash and cull logs for wildlife habitat.
10. Temporarily suspend harvesting activities if grizzly moves into sale area.

The Forest has consulted the following interests:

- Wyoming Game and Fish Commission
- Wyoming State Clearinghouse
- Wilderness Society
- Sierra Club
- Jackson Hole Alliance for Responsible Planning
- Earth First!
- Wyoming Wildlife Federation
- Wyoming Outdoor Council
- U.S. Fish and Wildlife Service
- Teton County Commissioners
- Jackson Hole Outfitters and Guide Association
- Louisiana-Pacific Corporation
- National Elk Refuge
- Yellowstone National Park
- Grand Teton National Park
- Wyoming Wood Products, Inc.
- Star Studs

H. Gunsight Pass Timber Sale -- Bridger-Teton National Forest

The Gunsight Pass Sale will harvest 4.8 MMBF of timber from approximately 354 acres of patch and group clearcuts in the Gunsight Pass area of western Wyoming. Approximately 2,500 cords of firewood will be available for public use following the sale. There are no known threatened or endangered species on the project area.

Three alternatives were evaluated in addition to the no action alternative. The selected alternative offers a timber harvest level 40 percent below the highest alternative evaluated.

The preferred alternative emphasizes recreation and wildlife. New road construction will be mitigated "to the extent necessary" to keep the affected areas in a semi-primitive motorized recreation opportunity classification. Wildlife concerns will be addressed in several ways, such as limiting clearcut size to 26 acres and prohibiting activity in adjacent drainages. The Decision Notice states that, "There will be no change in the capacity of the range and a 2 percent decrease in habitat effectiveness for big game animals."

The proposed action will include the following mitigation measures to protect non-timber resource values:

1. Lay out treatment units according to accepted elk logging guidelines.
2. Limit clearcuts to 26 acres with irregular shapes.
3. Rehabilitate any new road construction to appear natural.
4. Pile and burn slash.
5. Plant treated stands with lodgepole pine seedlings.
6. Restrict log hauling to dry road conditions.
7. Coordinate road closures with outfitters.
8. Leave snags for non-game animals in cutting units.
9. Employ dust abatement measures.

The no action alternative would allow unchecked insect and disease infestations to produce losses of 10 MBF/acre (virtually the entire stand) from the Cottonwood-Gunsight area and 6 MBF/acre from the Sohare area from the lodgepole pine component over the next 50 years.

The Forest has consulted the following:

- Wyoming Game and Fish Commission
- Wyoming State Clearinghouse
- Wilderness Society
- Sierra Club
- Jackson Hole Alliance for Responsible Planning
- Earth First!
- Wyoming Wildlife Federation
- Wyoming Outdoor Council
- U.S. Fish and Wildlife Service
- Teton County Commissioners
- Jackson Hole Outfitters and Guide Association
- Louisiana-Pacific Corporation

VI. REVIEW OF THE FOREST PLANS LISTED IN THE THREATS INVENTORY.

The Greater Yellowstone Coalition's Threats Inventory includes proposed Forest Plans for six national forests -- the Beaverhead, Bridger-Teton, Custer, Gallatin, Shoshone, and Targhee. We have reviewed those five of these Forest Plans that are available in draft or final form (the Bridger-Teton has not yet been issued as a draft). We believe that they pose no significant threat to either Yellowstone Park or the ecological integrity of the surrounding area. This section will review the Plans to illustrate the measures taken to coordinate the timber program and non-timber program objectives.

A. Shoshone National Forest Plan

The Shoshone National Forest borders Yellowstone National Park on the East. Planning problems addressed in the Shoshone's Draft EIS include: (1) adequate recreation opportunities; (2) wilderness management needs; (3) wildlife and fish habitat protection; (4) management of threatened and endangered species; and (5) balanced timber management for multiple resource purposes.

Grizzly bear recovery is a major objective. The Forest states in its Draft EIS that it is "a part of the Yellowstone ecosystem which represents a realistic opportunity for maintaining a viable grizzly bear population."

The Shoshone's draft plan proposes an average annual harvest of about 10.5 million board feet of sawtimber and 0.6 million board feet of poletimber per year. This production level will involve timber harvest activities on only 4 percent of the Forest's total land base. This means that less than 0.4 percent of the Forest will be affected by timber harvest in any ten year time span. Management programs for the remaining 96 percent of the Forest will produce the following benefits:

> Visual Resources -- "Scenery modifications resulting from management activities will be evident in some high use areas, but the characteristic landscape of the Forest will remain substantially unchanged."
>
> Wilderness -- "While the Wyoming Wilderness Act of 1984 resolved most of the wilderness versus nonwilderness issues, the proposed Plan provides for management of many of the presently unroaded areas to remain in a primitive or semi-primitive nonmotorized recreation setting." Nearly 75 percent of the Forest will be managed for wilderness, wild and scenic rivers, research natural areas, and roadless, nonwilderness recreation.
>
> Grizzly Bear Recovery -- "The proposed Plan incorporates direction for management of occupied grizzly bear habitat, 'Guidelines for Management Involving Grizzly Bears in the Greater Yellowstone Area'...Protection and management of the bear and other T&E (threatened and endangered) species is provided by implementation of Forest Direction and Management area prescriptions in the form of standards or restrictions placed upon conflicting activities."

Fish and Wildlife -- "The proposed Forest Plan identifies and protects those areas of the Forest regarded as crucial or necessary habitat components for big game, unique, and threatened and endangered species ... Fish habitat is protected by adherence to standards and guidelines for riparian area management contained in the proposed Plan."

Air Quality -- "The Forest will help develop and implement monitoring plans designed to investigate air quality related values in wilderness and to determine levels of acceptable change resulting from ambient air pollutants. The Forest will coordinate and cooperate with the State and other agencies to control sources of pollution that could affect wilderness air quality."

On the 4 percent of the Forest where timber harvest will occur, timber sale projects will be controlled by standards and guidelines "intended to integrate other resources objectives into timber sale design." These standards and guidelines will "ensure the maintenance of visual quality at a high level" and "incorporate systems that benefit wildlife where possible and mitigate potential negative impacts in all other cases." Soil and water monitoring will be done to "gauge the success of standards and guidelines used to prevent impacts on soil productivity and water quality."

The Shoshone's Draft EIS states that consultation with other agencies during the planning process included both formal and informal contacts with "numerous local, state, and Federal agencies," including:

- Wyoming Game and Fish Commission
- U.S. Fish and Wildlife Service
- Bureau of Land Management
- National Park Service
- Wyoming Department of Environmental Quality
- Wyoming Office of the State Engineer
- Bureau of Indian Affairs
- U.S. Environmental Protection Agency
- Park County Planning Commission

B. Gallatin National Forest

The Gallatin National Forest borders Yellowstone National Park on the West and North. The Gallatin's draft plan proposes an average annual harvest of about 21 million board feet of sawtimber per year over the next 10 years. Approximately 18 percent of the Forest is classified as "suitable" for timber management. This relatively large suitable land base allows flexibility to schedule timber harvest activities with minimum impact on other resource values. However, timber production will be the primary management emphasis on only 4 percent of the Forest's total land base. Achieving the 21 million board foot annual harvest level will actually involve timber harvest on about 1.8 percent of the Forest over the next ten years. Management programs for the 82 percent of the Forest not considered "suitable" for timber management will produce the following benefits:

> Visual Resources -- Visual quality objectives will guide "all activities which will alter scenic values on the Forest." Visual quality objectives designed to maintain the natural appearance of the Forest will be applied to 87 percent of the Forest (Preservation, Retention, and Partial Retention). Even on the remaining 13 percent where noticeable visual modifications will be allowed, they must "blend in shape and scale to the natural elements of the landscape."

Wilderness -- Under the management program proposed in the Gallatin's Draft EIS, 43 percent of the Forest would be designated as wilderness. An additional 29 percent of the Forest would be managed under a "roadless management emphasis." In total, 72 percent of the Forest will be managed for activities which preclude timber harvest (wilderness, roadless recreation, wildlife habitat, etc.) Only 28 percent of the Forest will be roaded once the road system is fully completed.

Grizzly Bear Recovery -- Approximately 43 percent of the land within the Gallatin has been identified as occupied habitat for the grizzly bear. Standards and guidelines for management of national forest lands within the occupied habitat were approved in September 1984 and are currently in effect. All current and proposed activities on the Gallatin will be reviewed to determine their potential impact on threatened or endangered species. Any activity determined to have a potential adverse effect on the survival of a threatened or endangered species "will be modified or disallowed." Programs to benefit threatened and endangered species "will be coordinated with the Montana Department of Fish, Wildlife, and Parks, the U.S. Fish and Wildlife Service, and Yellowstone National Park."

Fish and Wildlife -- "A set of 'Best Management Practices,' which apply to management activities that may affect water quality and fish habitat, will be used to protect the fisheries on the Forest. Important wildlife concentration areas will be managed to minimize the impact of other resource management on wildlife. Road closures will be used to provide wildlife security and a diverse hunting opportunity on the Forest. The habitat requirements of non-game species will be considered in management activities such as timber harvest, range allotment planning, and prescribed burning." Riparian areas will be managed to "protect the soil, water, vegetation, fish, and wildlife dependent upon it."

Air Quality -- The Forest will "cooperate with the Montana Air Quality Bureau in [implementation of] the State Implementation Plan (SIP). The requirements of the SIP and Montana Smoke Management Plan will be met."

Even on the 4 percent of the Forest where timber production will be the primary management emphasis, timber sale projects will be controlled by standards and guidelines designed to "provide for dispersed recreation opportunities, wildlife habitat, and livestock use that is compatible with the first two [timber production] goals." Best management practices will be used to protect water quality.

The Gallatin's Draft EIS includes an extensive list of individuals and agencies to whom copies were sent. The list includes, along with many others:

- Montana Department of Fish, Wildlife, and Parks
- U.S. Fish and Wildlife Service
- Bureau of Land Management
- National Park Service
- U.S. Environmental Protection Agency

C. Beaverhead National Forest Plan

The Beaverhead National Forest lies West of Yellowstone National Park, but does not directly border on it. The Beaverhead's draft plan proposes an average annual harvest of about 20.6 million board feet of sawtimber per year over the next 10 years. Approximately 18 percent of the Forest is classified as "suitable" for timber management. As with the Gallatin, this relatively large suitable land base allows flexibility to schedule timber harvest activities with minimum impact on other resource values. However, timber production will be the primary management emphasis on only 9 percent of the Forest's total land base. Achieving the 20.6 million board foot annual harvest level will actually involve timber harvest on about 1.6 percent of the Forest over the next ten years. Management programs for the 82 percent of the Forest not considered "suitable" for timber management will produce the following benefits:

> Visual Resources -- "All activities will be managed to minimize adverse impacts upon the visual resource within the specified visual quality objectives." Visual quality objectives designed to maintain the natural appearance of the Forest will be applied to 93 percent of the Forest (Preservation, Retention, and Partial Retention).
>
> Wilderness -- Under the management program proposed in the Beaverhead's Draft EIS, 15 percent of the Forest will be designated as wilderness. An additional 52 percent of the Forest will be managed under a "roadless management emphasis." In total, 67 percent of the Forest will be managed for activities which preclude timber harvest (wilderness, roadless recreation, wildlife habitat, etc.). Only 33 percent of the Forest will be roaded once the road system is fully completed.
>
> Grizzly Bear Recovery -- The Beaverhead contains no areas identified as "occupied habitat" in the Greater Yellowstone Grizzly Bear Recovery Plan. However, the grizzly bear "is suspected of inhabiting portions of the Madison Range ... and is an occasional visitor to the Tobacco Root Mountains and the Gravelly Range." The area of suspected use in the Madison Range is all within the Lee Metcalf Wilderness. The draft forest plan states that "Actions having the potential to affect the continued existence of any T&E species will be submitted to the U.S. Fish and Wildlife Service for formal consultation." In addition to grizzly management, the Beaverhead is also "an active participant is the Greater Yellowstone Bald Eagle Management Plan" and "an active participant in the Continental Divide Grey Wolf Coordination Plan."

Fish and Wildlife -- The publication A Holistic Approach to Wildlife and Fish Habitat Management will guide the Beaverhead's approach to fish and wildlife management. This document "povides specific policy and guidance to insure wildlife and fish habitats will be managed to support viable (or specified target) populations of all existing, as well as future, wildlife and fish species." Measures designed to mitigate the effect of management activities on the wildlife resource will include "timing of timber harvest activities, the spacial [sic] distribution and location of harvest units, timing and location of road construction, and travel restrictions on constructed roads." The Forest will "coordinate management activities with concerns expressed by the Montana Department of Fish, Wildlife and Parks regarding wildlife needs."

Air Quality -- "Protection of air quality will be a critical factor in the management programs for the Forest's portion of the Anaconda-Pintlar, and Lee Metcalf Wildernesses. Protection of air quality in these areas will be considered during fuels management programs occurring adjacent to the wilderness."

Even on the 9 percent of the Forest where timber production will be the primary management emphasis, timber sale projects will be controlled by standards and guidelines designed to "provide for dispersed recreation opportunities, wildlife habitat, and livestock use."

The Beaverhead's list of agencies consulted includes, along with many others:

- Montana Department of Fish, Wildlife, and Parks
- U.S. Fish and Wildlife Service
- Bureau of Land Management
- National Park Service
- U.S. Environmental Protection Agency

D. Targhee National Forest Plan

The Targhee National Forest borders Yellowstone National Park on the West. The Targhee's final plan provides for an average annual harvest of about 70 million board feet of sawtimber per year over the next ten years. The Targhee has been heavily impacted by mountain pine beetle infestations. At present, "it is estimated that 85 percent of the lodgepole pine stands are dead." A primary goal of the Forest's timber program is to "rapidly salvage and regenerate dead and dying stands of lodgepole pine." Approximately 42 percent of the Forest is classified as "suitable" for timber management. Even with the accelerated harvest of dead lodgepole pine, achieving the 70 million board feet annual harvest level will involve timber harvest activities on only 8 percent of the Forest's land base over the next ten years. Management programs for the 58 percent of the Forest not considered "suitable" for timber management will produce the following benefits:

Visual Resources -- Data presented in the Final Plan indicate that about 65 percent of the Targhee will be managed to meet Preservation, Retention, and Partial Retention visual quality management objectives.

Wilderness -- Under the management program described in the Targhee's Final EIS, about 10 percent of the Forest will be designated as wilderness. An additional 40 percent of the Forest will be managed as "unroaded and undeveloped." In total, 50 percent of the Forest will be managed for activities which preclude timber harvest (wilderness, roadless recreation, wildlife habitat, etc.).

Grizzly Bear Recovery -- The Targhee's Final Plan was submitted to the U.S. Fish and Wildlife Service as required by law. It was the Service's "biological opinion that implementation of the proposed Targhee National Forest Plan ... is not likely to jeopardize the continued existence of the bald eagle, peregrine falcon, or grizzly bear." The Forest will "consult with [Idaho] State Fish and Game Department and the Fish and Wildlife Service on all projects that may affect T&E species." They will also "cooperate with other agencies in developing recovery plans and habitat management guidelines for T&E species and sensitive species as applicable."

Fish and Wildlife -- The Targhee's Final Plan includes extensive standards and guidelines for management of fish and wildlife resources. In addition to these guidelines, the Forest will "utilize expertise of [the] State Fish and Game Departments in environmental analysis of Forest projects and in land management planning activities." They will also "meet at least annually with State Fish and Wildlife agencies to update comprehensive plans, define operating objectives, and schedule work needing coordination." The guidelines include measures to improve big game habitat, reduce human disturbance by regulating traffic use, and improve fish and wetland habitats with instream structures, riparian plantings, and nest structures.

Air Quality -- The Targhee's Final Plan mandates "Class I air standards on all Wilderness and recommended wilderness lands, and Class II standards on all other lands."

Following is a partial list of organizations that commented formally on the Targhee's Draft Plan:

- Idaho Department of Fish & Game
- Idaho Department of Parks and Recreation
- Wyoming State Planning Coordinator
- U.S. Department of Interior
- Wyoming Game and Fish Commission
- Yellowstone National Park
- U.S. Environmental Protection Agency

E. Custer National Forest Plan

The Custer National Forest borders Yellowstone National Park on the North. The Custer's Draft Plan proposes an average annual harvest of about 4.9 million board feet of sawtimber per year over the next 10 years. Approximately 7 percent of the proclaimed National Forest lands managed by the Custer would be managed for timber production. The Custer includes about 1.2 million acres of proclaimed National Forest lands and 1.3 million acres of National Grasslands. Achieving the 4.9 million board foot annual harvest level will involve timber harvest on about 0.7 percent of the proclaimed National Forest lands over the next ten years. The remaining 93 percent of the proclaimed National Forest will be managed to produce non-timber benefits.

VII. CONCLUSION

The conclusion of this rather exhausting review is relatively simple. The record demonstrates that: (1) the Forest Service has discharged the complex responsibilities described by the previous speaker; and (2) timber management in the Yellowstone area is, if anything, overly conservative. In fact, as the final speaker on this panel will illustrate, there is a serious question whether the Forest Service's timber management program will sustain the dependent communities in the area.

Merely adding proposed timber sales and draft national forest plans to a list of undesirable federal activities does not, alone, make them threats to the environment. We are concerned that such an approach to complex issues does not bode well for our ability to discuss and agree upon a balanced program of renewable resource management for the Yellowstone area.

RICHARD G. REID
EXECUTIVE VICE PRESIDENT
INLAND FOREST RESOURCE COUNCIL
MISSOULA, MONTANA

I. INTRODUCTION

Good morning. I would like to thank Chairmen Vento and Seiberling and other members of the Subcommittees for inviting me to testify today. My name is Richard Reid. I am Executive Vice president of the Inland Forest Resource Council (IFRC).

IFRC is an association representing manufacturers of solid wood products in western Montana and northern Idaho. Our industry in this region processes an average of 2.5 billion board feet of wood products each year. The timber industry accounts for the biggest share of the economic base of western Montana and northern Idaho. All of our members are either partially or wholly dependent upon the National Forests -- particularly those in the vicinity of the Yellowstone National Park -- as a source of supply for raw materials.

The previous two speakers focused primarily on issues involved with the management of lands surrounding Yellowstone National Park. I concur with their view that existing resource and environmental protection programs are more than adequate to address any so-called threats to this area. Moreover, even threats within the Park, which I will discuss, are being addressed by an innovative program initiated by the National Park Service.

The National Park Service has recently instituted a 12-Point management program to enhance the operation, protection, and future development of the 80 million acre National Park System. This plan was developed by William Penn Mott, the new Director of the Service. In fact, we understand that he accepted his appointment under the condition that he would be permitted to move forward with this plan.

ABLE

II. THE NATIONAL PARK SERVICE'S 12-POINT PLAN

Using existing statutory authorities, the plan focuses on the development of a long-range strategy to better protect natural, cultural, and recreational resources within the national parks. In fact, this is the first point in the overall 12-Point package. The other points include the development of programs to:

2) Pursue a creative, expanded land-protection initiative.

3) Stimulate our interpretation and visitor services responsibilities for greater public impact.

4) Effectively share the understanding of critical resource issues with our public(s).

5) Increase public understanding of the role and function of the National Park Service.

6) Expand the role and involvement of citizen groups at all levels in the National Park Service.

7) Seek a better balance between people management and resource management.

8) Enhance the ability to meet the diverse uses that the public expects of national parks.

9) Expand career opportunities for all employees.

10) Foster and encourage more creativity in the management, administration, and communications programs of the National Park Service.

11) Develop a team relationship between concessionaires and the Service.

12) Recognize problems as opportunities.

Director Mott has advised the Subcommittees that this plan can be implemented without new legislation. He has also informed the Subcommittees that protection of lands around the parks can be carried out under current statutory authority and regulations.

In looking at the Park Service plan, one point directly addresses issues and concerns about areas outside of current National Park boundaries. That is, point number two -- Pursue a creative, expanded land protection initiative. Director Mott stresses that the highest priority in protecting the Parks is to assure proper management of those lands that are in the system. He notes that, where necessary, expansion of the Parks System can be carried out through innovative acquisition techniques. At no point does he call for additional regulatory protection -- except for acquisition -- for lands adjacent to the national parks.

We believe that point number six -- Expand the role of citizen groups at all levels in the National Park Service -- is an appropriate step to take concerning sensitive concerns surrounding management of the National Parks. In the recent past, the Park Service has lagged behind other federal land managing agencies in developing ways to assure public involvement in Agency decisions. Seeking input from the Greater Yellowstone Coalition is a useful first step in consulting the public about the decisions that are made by Park managers regarding Yellowstone National Park's resources. However, the Agency should take this effort a step further and secure the advice of private landowners in the area surrounding Yellowstone and other parks.

The Secretary of Interior has established a Park Protection Working Group to: (1) review the land use policies and procedures of various Federal agencies; and (2) recommend ways to improve operations and resolve resource conflict problems among them. The Working Group, consisting of respresentatives from the Park Service, Bureau of Land Management, Fish and Wildlife Service, and Forest Service, has agreed to look at "Park Protection" in the context of:

1. how to anticipate conflicts;
2. how to avoid conflicts; and
3. how to resolve conflicts.

This program will require various changes and enhancements of existing agency procedures.

In addition to resolving near term conflicts by cooperating with other agencies, the Park Service should follow the precedent set by the Forest Service and seek inter-agency consultation during the early stages of the development of long-term Park management plans. This coordination will help eliminate unnecessary conflicts among federal and state agencies, and duplication of effort.

While point number twelve of Director Mott's plan -- Recognize problems as opportunities -- sounds trite, it bears directly on this issue. In the past, the Park Service has sometimes waited too long to seek consultation with its sister agencies and has let problems that could have been resolved more easily escalate into major interagency disputes.

In conclusion, we support the 12-Point plan developed by Director Mott, and believe that it represents a useful and appropriate blueprint for protecting National Park resources using existing statutory and regulatory authorities. Combined with a greater willingness on the part of the Park Service to seek public involvement in its decision-making processes, the new program will assure that the resources of the national parks will be protected and managed for future generations.

I appreciate the opportunity to offer our views on this matter. I would be pleased to respond to any questions that you have.

IFR INLAND FOREST RESOURCE COUNCIL
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STATEMENT OF THE
INLAND FOREST RESOURCE COUNCIL
TO THE
SUBCOMMITTEE ON PUBLIC LANDS
AND
THE SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION

U.S. HOUSE OF REPRESENTATIVES
OCTOBER 24, 1985

The Inland Forest Resource Council is an organization of forest product manufacturers in Montana and northern Idaho. The goal of the Council is to maximize timber supply from public and private lands in the region under the principles of multiple use. Council members account for all of the industrial privately owned commercial forest land and for most of the timber harvested from the national forests in the region. The Council also co-sponsors the Tree Farm Program in Montana.

The concept of a "Greater Yellowstone Ecosystem" is of academic interest but little practical value. It is doubtful that such a thing could be defined on the ground without being totally arbitrary, and its formal establishment would further unreasonably constrain management of the Gallatin National Forest and have a chilling effect on the management of surrounding private commercial forest lands.

CONSERVATIVE MANAGEMENT

The announced purpose of formally establishing a "Greater Yellowstone Ecosystem" is to protect Yellowstone National Park from alleged mismanagement outside its borders, but is there mismanagement of the land surrounding Yellowstone National Park?

DEDICATED TO INTENSIVE MULTIPLE-USE MANAGEMENT OF OUR FOREST RESOURCES

Since we are not familiar with the area in Wyoming and Idaho, our remarks apply only to Montana.

Most of the land adjacent to Yellowstone National Park in Montana is administered by the Gallatin National Forest. As such, it is managed under different rules than the national parks. The extent to which the Gallatin National Forest is applying these rules conservatively can be found in the draft forest plan released this summer. Of 1,334,778 acres of forest land, only 314,014 acres, or 23%, is considered suitable for timber production. (Actually much more is physically suitable but has been allocated to other uses.) Of the suitable timberlands, 68,244 will be managed to optimize timber growth. This amounts to only 5% of the entire forest area. All of the remaining suitable land will be constrained to provide other outputs, principally recreation and wildlife habitat. Therefore, 95% of the Gallatin National Forest will see either no timber management activities or highly constrained activity.

A thorough review of the proposed Gallatin National Forest plan reveals that management actions will be driven by grizzly bear recovery, elk security and dispersed recreation. Timber management is a residual rather than a dominant use. No reasonable person could conclude that the proposed plan could be a threat to Yellowstone National Park other than that it is too conservative.

This conservative approach to management of the national forests surrounding Yellowstone National Park is in itself a form of mismanagement, which, over the years has led to a threat that no "green line" can erase.

Because of the lack of an aggressive timber management program, the mountain pine beetle has devastated thousands of acres of forest on the Gallatin and is threatening the park itself. One only need drive south on U.S. Highway 191 from

Bozeman to West Yellowstone to see the devastation created by this pest. The destruction of visual quality and the creation of a potentially disastrous fire situation caused by this form of mismanagement should not be tolerated. The formal creation of a "Greater Yellowstone Ecosystem" with special management regulations would only exacerbate this situation, not remedy it.

MANAGEMENT NO THREAT

Today the Forest Service attempts to operate under a myriad of laws and regulations. The creation of a "Greater Yellowstone Ecosystem" would further complicate things and probably would lead to management direction contradictory to the requirements of the Multiple Use-Sustained Yield Act and National Forest Management Act. Over the years, Congress has repeatedly affirmed the concept of multiple use of the national forests, and that concept includes the production of commodities.

There is substantial acreage of commercial forest land on the Gallatin National Forest, much of which already is unavailable because it is allocated to other uses. In addition, there is a large acreage of privately owned commercial forest land intermingled within the Gallatin National Forest. Taken together, these public and private lands support a substantial forest products manufacturing industry in the Bozeman/Livingston area that adds much to the local economy; yet, there is no evidence to suggest to a reasonable person that these activities are a threat to Yellowstone National Park.

The Forest Service, private forest landowners and Yellowstone National Park can coexist. Forest management operations do not threaten the park, but now the Park threatens private property rights and the ability of the Forest Service to even marginally sustain an industry which actually could be expanded.

The Inland Forest Resource Council opposes any formal recognition or establishment of a "Greater Yellowstone Ecosystem" or any attempts to impose the values and management standards of the National Park Service outside of the official park boundaries.

MARK A. SIMONICH
TIMBER MANAGER
BRAND-S CORPORATION
LIVINGSTON, MONTANA

My name is Mark Simonich. I have come here today from Livingston, Montana to represent the Montana Eastside Forest Practices Committee. The Eastside Committee is dedicated to monitoring and promoting wise and efficient uses of the National Forests and their many resources.

I appreciate the opportunity to offer my views to the Subcommittees. My interest in speaking to the Greater Yellowstone Ecosystem issue stems from a concern about my future and my children's future. I would like to be assured that my children are able to enjoy all of the benefits of our national parks and forests. I am a conservationist, and because of my belief in conservation I have studied and taken up a career in forestry.

The management of the lands in the Yellowstone area has a direct effect on me and my family. My employer, Brand-S Corporation is to a large degree dependent on national forest timber for its livelihood. Roughly 50% of the timber supply for our Livingston mill comes from the Gallatin National Forest, which adjoins Yellowstone National Park. An additional 35% comes from the Beaverhead National Forest and nearby private lands. I feel that these national forests are, if anything, currently managed more conservatively for timber production than they should be. For example, even though 23 percent of the Gallatin's lands are considered suitable for timber production, only 5 percent are managed to optimize timber growth. Any additional restrictions could seriously jeopardize the small timber sale program that currently exists.

To illustrate the situation, in the recent past the Gallatin National Forest has sold approximately 32 million board feet (MMBF) of timber annually. However, under the Forest Service's preferred alternative in its draft plan described by one of the previous speakers on this panel, the Gallatin will produce 21 MMBF in the future. According to the Forest Service, this may be reduced further to 17 MMBF under the new grizzly bear guidelines and other environmental constraints that the Agency is presently considering. Thus, even if the Gallatin National Forest produces its maximum output (17 MMBF) under the new national forest plan, it will likely reduce Brand-S's timber supply by 25 percent.

Brand-S directly employs 110 people and indirectly employs 150 people at its Livingston operation. Our direct payroll is $2.7 million annually, and the payroll of our indirect employees is $4.3 million. The people who are indirectly supported by the company are primarily our logging contractors, road builders, and other subcontractors. We are the third largest employer in Livingston.

Our continued operations are dependent upon a reliable source of raw material in the face of significant restrictions in the local timber supply. For example, in October 1983 our company bought Castle Mountain Corporation in White Sulphur Springs, Montana. Although we had hoped to keep both mills open, a shortfall of timber forced us to shut the doors of the White Sulphur Springs operation. Closing that mill resulted in the layoff of 85 people. Many of them were forced to leave the area because the mill was the town's only industrial employer.

Beyond the current restrictions on timber management on public lands, I am concerned that timber management activities on private land will be impeded if the entire Yellowstone area is preserved. As mentioned in Mr. Reid's testimony, the Forest Service's lack of an aggressive program to stop the spread of the mountain pine beetle has devastated thousands of acres of national forest lands. Additional management constraints on private lands would further exacerbate this and other problems that we currently face.

Notwithstanding the present controversy, logging and other resource development activities are certainly not new to the

Yellowstone area. Fur trappers and mountain men used this area during the early 1800's. In the 1860's the miners came in search of gold. As a necessary offshoot of mining, logging began to take place as early as 1862. Wood products were needed in the mines and towns. Ties were also needed for the expanding railroad system.

In 1864, a water-driven sawmill was transported into Montana and set up on the banks of the Yellowstone River about one mile downstream of where Mill Creek flows into the Yellowstone. This site is approximately twenty miles south of what is now Livingston. During the ensuing years, a great deal of logging was done, primarily in the form of tie hacking, in the Mill Creek drainage.

In order to provide a sustainable source of timber for the areas needs, the forest reserves were formed. In 1905, Gifford Pichot, then Chief of the Forest Service, advertised and sold a 50 million board foot timber sale in Mill Creek. This particular sale was never logged because of labor problems. However, it is evident of the intent of the Forest Service very early in its history to provide commercial products from the National Forests.

Many areas around Yellowstone have been logged during the past 120 years. Mill Creek is just one example of a drainage that has supplied timber for local needs for over a century and is still being managed for timber production today. This drainage has benefited in many ways from the logging that has taken place. The forest continues to be regenerated, and wildlife abounds in the logged-over areas which represent a mosaic of age classes.

Local historical accounts record many sawmills being established and run from the 1860's through the present time. Not all of these sawmills have survived and are still operating today, but they all helped with the settling of the area around Yellowstone. Some towns, such as Horr and Aldridge -- located in Cinnabar Basin just four miles from Yellowstone National Park -- supported a population of 1500 people at the turn of the century.

These towns were dependent upon both mining and timber harvesting for their economic well being. Today, the original town site of Aldridge is overgrown with trees and the entire Cinnabar Basin is a beautiful place to visit.

According to Bozeman's historical archives, an article from the local newspaper, "The Coast" from June 1908 is quoted as saying that there were five major sawmills operating in and immediately around Bozeman. The article goes on to say these five mills had a combined daily production capacity of 135 thousand board feet. This equates to roughly 32 million board feet per year. There were also many portable mills operating around the area. Yet, the standing timber inventory in the area today is greater than it was at that time. Through sustained yield management, these lands are capable of producing that volume and more today.

Throughout the growth and development of the area surrounding Yellowstone National Park, timber harvesting has played a key role in the economic stability of nearby communities. Today, when one mentions Yellowstone National Park and its surrounding communities, many tend to think of recreation and tourism. While these play an important part in the existence of these communities, they are not our sole lifeblood, nor have they ever been. The timber industry is a conscientious operator in the Yellowstone area today, and must continue to be for a stable economy and employment base to continue to exist.

As a resident of the Yellowstone area I am deeply aware of my responsibility to protect its unique natural resources. Indeed, the quality of life they afford is the reason that my family and I make our home in this part of the country. At the same time, I believe that many of these resources can be properly managed on a sustained basis to provide goods and jobs necessary to support our local economy. Even a cursory review of the area's history supports this proposition. In our deliberations about the Greater Yellowstone Ecosystem, we must not forget that man is also an integral part of the ecosystem.

STATEMENT OF MATTHEW M. REID, REPRESENTING THE MONTANA WILDERNESS ASSOCIATION, AND THE MONTANA WILDLANDS COALITION, BEFORE THE HOUSE SUBCOMMITTEES ON PUBLIC LANDS, AND NATIONAL PARKS AND RECREATION, COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, OCTOBER 24, 1985.

Chairman Seiberling, Chairman Vento and members of the Subcommittees, my name is Matt Reid. I am from Bozeman, Montana just to the North of the Yellowstone Ecosystem. I am a Wildlife Biologist and am here on behalf of the Montana Wilderness Association and the Montana Wildlands Coalition. These two groups are representative of approximately 20,000 Montana wildland enthusiasts and advocates--backpackers, fishermen, hunters, naturalists, mountain climbers, horsepackers, and wildlifers; people who advocate wilderness protection for the last vestiges of Montana's roadless area resource.

I am here to give testimony on the prospects of a national expression of a land ethic. The idea was first formalized by a truly great visionary--Aldo Leopold--who stated that a land ethic simply enlarges the boundaries of a community to include soils, waters, plants and animals, or collectively: the land.

Today, I see a necessary and national application of Leopold's idea, the land ethic, to one of our country's truly spectacular land communities--the Greater Yellowstone Ecosystem.

Nathan Langford and his peers were onto great things when the Yellowstone Park idea was first expressed, over 100 years ago. They envisioned protecting a "national treasure." That idea, and our country have changed immensely since then. We are well into the computer age, the frontier is tamed or changed, wildlands are no longer there to be conquered, they are now to be protected.

It's only right to go back to square one, our nation's first National Park, and truly one of the Earth's greatest for an example of the land ethic. Looking back with vastly educated eyes, we understand that Yellowstone National Park is part of a larger land community.

Yellowstone National Park is surrounded by a vast mountain cordillera. The lifeblood of Yellowstone is water. Headwaters of great rivers flow from these mountains. Three of our nation's major rivers--the Columbia, the Colorado and the primary headwaters to the mighty Missouri flow from this ecosystem. Any destructive tampering to these headwaters could damage an integral part of our nation's health--its water resource. Intelligent thinking requires that we protect this vital headwater resource.

Is is also no secret that Yellowstone has one of the truly great gatherings of wildlife in the world. The grizzly can thrive in the Yellowstone backcountry if the myriad of agencies and people involved with managing the bear will sit down and decide the consequences of living with the great bear--then live that way. The Rocky Mountain elk and Bison thrive in Yellowstone--like no where else in the world. And talk about wild trout. How many have fished headwaters country? Yellowstone cutthroat, brown and rainbows thrash in pristine waters providing a pastime for the local guy, as well as great leaders. In the Yellowstone Ecosystem, as in few other places, fishing is an activity in its purest form.

The Yellowstone Ecosystem is pristine watershed, and world class wildlife country. In contrast to the nation--the Ecosystem is intact. Major development has yet to face-lift the beauty of the ecosystems untrammeled lines primarily because the Yellowstone Ecosystem boasts one of our countries last great vestiges of wilderness--a nationally rare heritage. This wilderness is essential to the health of the critical watershed and to the natural concentrations of large mammals and wild trout.

This national heritage has remained pristine throughout the pioneer conquest of this country. The pioneer days are gone. Yet new threats of the modern age loom on the Yellowstone Ecosystem horizon.

The Primary Threats

Listing the threats to the Yellowstone Ecosystem would be arduous--suffice it to say that they are listed in available sources. The threats are numerous and of a degree that would cumulatively destroy the Yellowstone country as we know it today.

The threats can be categorized on two levels: 1) competing uses; these include logging and associated roads, high density recreational development, overuse of sensitive areas, oil, gas and geothermal leasing, hard-rock mining, overgrazing, subdivision, noxious weeds, water projects and more; and 2) competing agencies and conflicting mandate. The vast majority of the Yellowstone Ecosystem is within the public domain. Yet working through the tangle of inter-agency, inter-state, inter-county and private, jurisdiction proves not only formidable but unmanageable.

Of concern to me, because of my specialist background in grizzly bear management and habitat, is the issue of logging and associated road systems in critical grizzly bear habitat. In the forest planning process, the concept of grizzly-timber management has been presented by the Forest Service. The Forest Service proposes to improve grizzly bear habitat by building new roads into critical grizzly habitat, removing the overstory and producing an earlier stage of plant community succession, and then mitigating the consequences of these actions on a case by case basis in behalf of the grizzly.

My initial involvement with these proposals include Forest Service plans for logging in unsuitable high elevation timber types in the Kersey Lake area to "improve grizzly habitat." They refer to the project as wildlife manipulation, with timber harvest as the preferred treatment.

The Forest Service acknowledges that the sale is below cost, and readily admits that the present stand condition is more desirable for grizzlies than the cutover condition would be. They stress that a few people in a small Wyoming community can make some money on the wood. And predict that new open road densities created by the sale will negatively impact grizzlies. The local Forest Biologist put it to me this way: "if we can't make this grizzly-timber sale work--we can't sell any wood in grizzly habitat in this forest."

I asked the biologist "What's Changed?" The sale is a public money loser. It will destroy, not improve, critical grizzly bear habitat. The new road densities can only increase the risk of grizzly mortality. Both of these consequences are absolutely counter to Yellowstone grizzly recovery. The biologist could only answer with a shrug.

And yet, the Forest Service proposes to do this throughout 135,000 acres of known critical Yellowstone grizzly habitat on the Gallatin National Forest, just North of the Park. I see this on the trickle-down end--first hand--and I'm here to tell you it's misleading and the public needs to know this.

The example of grizzly-timber management is an amplification of the agencies change in heart--"do something for the grizzly." But it is also an example of the agencies unwillingness to change--"business as usual." In final consequence, "business as usual" is increasing cumulatively throughout the ecosystem--And I fear it spells an end to grizzlies and the wilderness heritage of the Yellowstone Ecosystem.

Aldo Leopold's land ethic can be more than an idea--it can have its place in our national conscience--where it belongs. We can start back at square one--the land community where grizzly and elk thrive, wild trout swim, geysers burst upward--and a wall of pristine mountains truly encircle a national heartland--The Greater Yellowstone Ecosystem.

In the Yellowstone Ecosystem where wildlife has no boundaries we need a visionary approach to the land, its problems and threats. In these great halls, rigorous, honest leadership will ultimately decide the Ecosystem's fate. Hear this Montana plea for today and for a vision of a great place where people can always look directly at their original wilderness wildlife and water heritage and be assured that they exist.

TO: Subcommittees on Public Lands and on National Parks and Recreation

FROM: Leonard R. Sargent, Sargent Ranch, Corwin Springs, Mt., 59021

RE: Joint Oversight Hearing on Greater Yellowstone Ecosystem on October 24, 1985

Thank you for giving me the opportunity to testify before your very important subcommittees regarding the Greater Yellowstone Ecosystem.

I am Leonard Sargent and have ranched for the past 24 years just north of Yellowstone National Park and west of the Yellowstone River. My background includes a degree in Geology from Princeton, 5 years as a Naval officer in World War II, and many years as a teacher of Math and Science, while coaching ice hockey and football in an eastern boarding school. I have been involved in conservation causes in the Northern Rockies for many years, serving on Boards of MWA, NRAG, MEIC, PLI and presently those of NRDC and the Northern Yellowstone Rim Alliance. I am particularly proud to have been one of the founding members of the Greater Yellowstone Coalition.

While I cannot claim to be a third-generation Montanan, I am proud that a relative of mine, Nathaniel P. Langford, was one of the six Bozeman businessmen who, while camping on the Madison River, decided that the lands surrounding them were so unique that they should belong to all the people of the USA for their enjoyment forever, and thus was conceived the historic idea of a "national park"! All the parks in the world to some degree owe their existence to these farsighted men, and Yellowstone is often considered the "Crown Jewel". Langford, himself, spent considerable time in Washington from then on - first to sell the idea to Congress and President Grant, and second to fight for the necessary funding to carry out the project - and he, in fact, became the first Superintendent of Yellowstone - unsalaried, I might add! It is interesting to note that even then considerable opposition came from local people with special interests - words such as "it's a lockup" and so on. Fortunately, they did not prevail.

Personally, I've hunted, fished, hiked and enjoyed this whole area for over 30 years. My wife and I have felt so strongly about the special attributes of our small part of it that we gave a conservation easement on our ranch to The Nature Conservancy to ensure the preservation of its wildlife, habitat and other priceless resources in perpetuity - no subdivisions or other buildings, no commercial timbering or hunting nor shooting or anything except deer and elk.

Because of our proximity to the northwest "bulge" of YNP, we have been very conscious of being a part of an "ecosystem". We "share" with the Park deer, moose, bighorn sheep, elk and numerous smaller animals and birds as they wander back and forth between us - in particular, grizzly bears, which use our area year-round because of its excellent habitat, even for denning. We run cows and horses year round, and neighbors have sheep, pigs, pigeons, chickens, etc., and, in 25 years we've lost 2 cows to lightening, 4 to bullets and just possibly 1 to a grizzly. We all enjoy having grizzlies around all year (except in deep winter) - we don't bother them, and they don't bother us! (Many oldtimers will give you the same philosophy about living with coyotes!) However, too much public access, oil and gas leasing and/or exploration, timbering, etc., would destroy grizzly habitat and shrink their "living area" even further, causing more human/bear conflicts and detrimental impacts. Perhaps my ancestor and his friends should have pressed for a larger Park, but the ecosystem idea was not understood as well in those days, and it's now too late to change the boundaries, though not the management of the "ecosystem".

I have been asked to testify today by the Greater Yellowstone Coalition and by the Northern Yellowstone Rim Alliance, one of the Coalition members. The issues, however, are so important that I would have come to this hearing anyways, and I am paying my own way.

The NYRA refers to land (part Forest Service and part private) bordering the northwest "bulge" of Yellowstone National Park, where the Gallatin National Forest would like to condemn at great expense additional accesses thru the private properties to reach a narrow strip of FS land adjoining the Park for the most part. As it is now, almost 90% of the FS sections can be reached for quality hunting without trespassing on Park or private lands. In some cases, the distances are long (0 to 10 miles) and difficult, but that's why the habitat is so outstanding and the hunting of such excellance! Also, it is these circumstances that result in possibly the best grizzly bear habitat in the entire ecosystem, used, as I've mentioned, thruout the year.

Additional access into this area is unnecessary, would be very expensive and counter-productive thru the numerous and disastrous impacts on this important part of the ecosystem. There is already sufficient access for the resources of the area. There isn't time to list all of these threats, but a more detailed record of the NYRA concerns is attached. The solution in this particular case is simple, inexpensive and easy - don't disturb the status quo - "if it ain't broke, don't fix it!" Please - let us preserve the "pockets" like the Northern Yellowstone Rim area that are still available to wildlife by keeping the status quo and eliminating the myriad threats -- even President Wilson recognized its values by making it a "wildlife preserve" until Hoover returned it to the Homestead Act lands.

While I feel it rather presumptuous of me to suggest to these committees ways for improving the management of the Greater Yellowstone ecosystem, I guess that is how democracy should work - so here goes:

1. Obviously the mishmash of bureaucracies at national, state and county levels (at least 32) involved in this ecosystem create an impossible and ridiculous situation, even if they were not jealous of each other and fighting for their own "turf".

2. While enlarging the Park might have been a good idea 100 years ago, it could not be done today, and even if tried might well be counter productive, as would the "buffer zone" approach.

3. Some way must obviously be found that would ensure that all or some of these bureaucracies work together with the single goal of protecting the Greater Yellowstone Ecosystem under the conditions existing today, while eliminating as many of the present threats in place or proposed, both now and hopefully forever.

4. I'm afraid it's obvious that just a mandate from Congress and/or the President would NOT come even close to being adequate. Just look at how the Endangered Species Act is being circumvented and even ignored!

5. It seems to me that Congress should create an oversight committee that is dedicated to the protection and preservation of the Greater Yellowstone Ecosystem with the authority to force the compliance of the involved bureaucracies.

I realize this a a whole lot easier to say than to do. I also know that I am not completely knowledgable about the field of government procedures, but my knowledge of the area is considerable, and my fears for its future are great.

Thank you again for this opportunity to testify at this hearing. Good luck!

NORTHERN YELLOWSTONE RIM ALLIANCE

P. O. Box 471
Corwin Springs, Montana 59021

Route 1, Box 687
Emigrant, Montana 59027

May 23, 1984

Mr. Larry Lewis, District Ranger
Gardiner Ranger District
Gallatin National Forest
Gardiner, Montana 59030

Dear Mr. Lewis:

The issue of new public access to National Forest lands bounding Yellowstone National Park raises questions of local and national import. Vigorous local debate and thorough press coverage indicate considerable public interest. A summary of public comment prepared by your office, dated 12/20/83, identified numerous specific questions and concerns. Citing a need for clarification, your office subsequently issues a "situation statement" dated 12/23/83 and gave notice of plans to prepare an environmental assessment (EA). You have stated that the EA "will evaluate the need for public access to National Forest lands in the area".

The Northern Yellowstone Rim Alliance (NYRA) shares public concern over additional access into lands adjacent to Yellowstone Park. The Alliance comprises local residents intimately familiar with the "assessment unit", principally Tom Miner, Cinnabar and Mol Heron drainages. The NYRA Board of Directors includes a Conservation District supervisor, a wildlife biologist, ranchers, outfitters, a forester and lifelong residents with long-established records of commitment to wise resource use. The Board retains a professional resource consultant and staff. NYRA believes that plans to develop additional access into the Northern Rim warrant immediate and careful reconsideration. Problems arising from increased pressures into this sensitive area clearly overshadow limited benefits. We would welcome the opportunity to participate in the decision-making process.

(1) Wildland Integrity:

Because the area is wild and difficult to reach (hence not susceptible to heavy public use) and because traditional land uses have essentially been compatible with maintenance of wildland qualities, the area concurrently supports low-intensity human use and a unique wildlife community. Northern Rim lands constitute an unequalled, de facto wilderness, a vital part of the Yellowstone ecosystem. Demonstrably capable of accommodating status-quo uses, the area cannot tolerate resource use beyond current levels without commensurate environmental degradation, such as is occurring already throughout the Yellowstone ecosystem. Increased access into the Rim area will severely disturb this wild, isolated portion of the ecosystem - damaging the whole. In 1917, President Woodrow Wilson created a "wildlife preserve" from the Yellowstone Park boundary to Tom Miner Creek (the NYR area) - we wholeheartedly support that underlying concept and encourage the Gallatin National Forest to take the lead in managing its included Forest Service lands as part of a "buffer zone" for the Yellowstone Park ecosystem.

(2) Wildlife:

Grizzly bears, bighorn sheep, elk, moose, mountain goats, mountain lions and wolverines are among the large mammals occupying the Northern Rim area. Each species requires a degree of isolation. Increased access and access-dependent activities will take a high toll on the "threatened" grizzly. Man-caused mortality and habitat loss are the principal causes of the decline of the Yellowstone grizzly population. Habitat degradation, displacement of grizzlies and direct conflict with recreationists are inevitable results of intensified human use. Management options leading to intensified recreational or resource extraction activities also run counter to the intent of the Grizzly Bear Recovery Plan, the Guidelines for Management of Grizzly Bears in the Greater Yellowstone area and the U.S.F.S. goal of zero man-caused grizzly mortalities. Adverse impacts on the remnant grizzly population are alone sufficient grounds for rejecting increased-access management.

Bighorn sheep wintering and lambing ranges would be adversely affected by increased access. The Tom Miner/Cinnabar herds are the core for population expansion into drainages to the north. Disturbances during lambing season would reduce lamb:ewe ratios, disrupting continued population growth and dispersal. Late-season recreational pressures (elk and sheep hunting) on winter range would further stress sheep at that critical time.

Large numbers of elk calve in the Northern Rim area. Disturbances of calving areas due to intensified human use would displace and stress cow elk, reducing calf production. Elk hunting quality would decline sharply from present levels of excellence. Department of Fish, Wildlife & Parks of Montana and U.S.F.S. research have identified a strongly negative correlation between hunting quality and ease of access.

The Northern Rim is also home to the secretive mountain lion and wolverine. The mountain goat is extending its range into the area, and the endangered peregrine falcon has been observed along Gallatin Divide ridges. Individually and as a group, these species and the elk, bighorn and grizzly are indicators of wildland quality so rare and valuable as to demand special management at low-use levels, i.e. the status quo.

(3) Headwaters:

The Northern Rim is Yellowstone River headwaters country. Negative impacts on water balance and water quality accumulate with increased use in a headwaters area. Accelerated runoff rates, erosion, siltation and contamination of water would result from increased access.

Drainages in the Northern Rim unit provide spawning habitat for and are occupied by the rare Yellowstone cutthroat trout. Increased recreational pressure and loss or degradation of habitat will lengthen the odds against the survival of this indigenous species.

(4) Range/Native Flora:

Additional access into the area bodes ill for range quality and native vegetation. Steep terrain, high recovery times for plant species and communities and the inevitable introduction of noxious weeds would multiply the impacts of greater numbers of people, vehicles and pack/saddle stock. The spectre of weed proliferation - spotted knapweed and leafy spurge among others - is cause for grave concern. An infestation of knapweed would have alarming consequences for native flora, wildlife and livestock.

(5) Geological/Archaeological Features:

Petrified wood deposits are found throughout the Northern Rim unit. Although the Forest Service currently requires collection permits, serious deterioration of this resource has resulted from illegal and poorly regulated collection. Greater recreational pressure on the area would exacerbate this problem. Likewise, archaeological sites - existing and undiscovered - would be damaged or destroyed.

(6) Impacts on Local Communities:

Increased access via public easements over private lands would pose critical problems for landowners - among them, the dramatic reduction in property values. Trespassing, vandalism, depredation and the introduction of weeds equate to potentially staggering losses for ranchers through increased operating costs and direct losses. The undermining of local outfitting businesses would result in significant reduction or loss of services to resident and non-resident recreationists, loss of livelihoods and loss of revenues to local economies. Residents of the area would find the quality of life degraded and their traditional lifestyles threatened by the impacts of increased numbers of people. Not least, hard-pressed local government would bear added responsibility for road maintenance, law enforcement, garbage disposal and other services. The Cinnabar Basin road cannot safely handle additional traffic. The Tom Miner road would quickly deteriorate under increased use. Park County also would be liable for the safety of Yellowstone River bridges at Carbella and Corwin Springs. Additional traffic likely would necessitate replacement of these old bridges.

(7) Cost of Acquiring Access Easement:

The costs of acquiring access easements would be considerable. Recent legal precedents establish landowners' rights to incorporate losses and devaluation of their entire property into the purchase price. Easements across private properties in Tom Miner, Mill, Mol Heron and Horse Creek drainages would cost the taxpayer millions of dollars in purchase costs alone. Court and legal costs would add significantly to the total cost.

(8) Consumptive Resource Use:

To this point, our concerns have addressed problems arising principally from additional access routes and resultant increases in public recreational use. A 1977 U.S.F.S. report notes timber and mineral extraction as benefits of new access into the Northern Rim. Resource extraction in this area raises an entirely new class of questions, such as policy questions and fundamental philosophic questions of values. Do we as a nation value low-volume timber production more than remnant North American mountain wildland and wildlife? Do we value unknown (almost certainly non-existent) mineral reserves above the national treasure, Yellowstone Park? Roading and conventional logging pose far-reaching problems for wildlife and the present environmental quality of the Rim area. Further, removal of marketable timber from the remote, high-elevation Rim implies "deficit logging". The cost of road building along would be impossible to justify. Potential loss of tax dollars and concurrent degradation of wildland character would not serve the public interest.

(9) Policy and Law Enforcement Considerations:

To the end of reducing grizzly/human conflict, current National Park Service policy limits visitor use in Park areas adjacent to the Northern Rim assessment unit. New access through FS lands would facilitate increased recreational pressure on and across the Park voundary. The result of this contradiction in agencies' policies would be irreversible damage to a fragile alpine/subalpine community - including, again, the beleagured grizzly. The potential for poaching, horn-hunting and unauthorized camping in the Park as well as trespassing on private property would place unrealistic burdens on landowners and on the Park Service, Forest Service, the Fish, Wildlife and Parks and Park County law enforcement personnel and budgets.

Notable among burdens thrust on landowners would be the threat of man-caused fire. Property losses would be compounded by costs incurred in controlling fire which jumped to public land; landowners bear legal liability for fire originating on their property.

(10) Forest Service Management Overview:

It seems difficult to imagine well-balanced resource use Forest-wide and fruitful cooperation among land managers in the absence of a master plan. The unfinished Gallatin National Forest Plan presumably would identify resources, set priorities and outline appropriate management strategies. We suggest that a decision regarding new access could best be made within the context of a comprehensive Forest Plan that would incorporate public comment and direction as well as current research.

Discussion of public access into the Northern Yellowstone Rim begs the fact that public accesses already exist throughout the area. Six trails, one snowmobile route and one road presently serve the public right of access to the public lands within the area. We recognize this right and support its foundation in public trust doctrine. Rights, however, imply responsibilities - we must all share the responsibility for prudent management of public-trust resources. NYRA feels very strongly that present accessibility and low levels of human use in the Northern Rim country best serve the public interest.

We submit that an initiative to develop new access across private lands in the Northern Rim area would be wholly inappropriate. Unless an EA addressing each of the listed concerns leads the FS to a "no additional access" conclusion, an Environmental Impact Statement will be required to fully examine the implications of development in the Northern Rim. Development of new access represents a major federal action which will significantly alter the human environment. The breadth and depth of our listed concerns, the quality of the Rim area, the potentially devastating impacts on the immediate area and on Yellowstone Park and the implicit threat of use of the eminent domain doctrine clearly identify this as a question for consideration within the guidelines of the National Environmental Policy Act.

Sincerely yours,

Board of Directors,
Northern Yellowstone Alliance

R. B. Malcolm

L. R. Sargent

B-Bar Ranch

J. H. Hoak

cc: Senator Max Baucus
Senator John Melcher
Rep. Pat Williams
Rep. John Seiberling
Reg. Forester Tom Coston
GNF Supervisor John Drake
Chief, USFS Max Pederson
Super., YNP Bob Barbee
NPS Director Russell Dickerson
USFWS Chris Servheen
Wayne Brewster
Mt.FW&P Jim Flynn
Park County Commissioners
James M. Goetz, atty.
others

NORTHERN YELLOWSTONE RIM ALLIANCE AREA

(West Gardiner Access Unit)

At the present time, there are approximately 66 Forest Service sections in the NYRA area. All but 8 can now be reached without crossing YNP or private land. This access is not always easy or short, but that is why it now provides and can continue to provide quality hunting - an increasingly rare commodity!

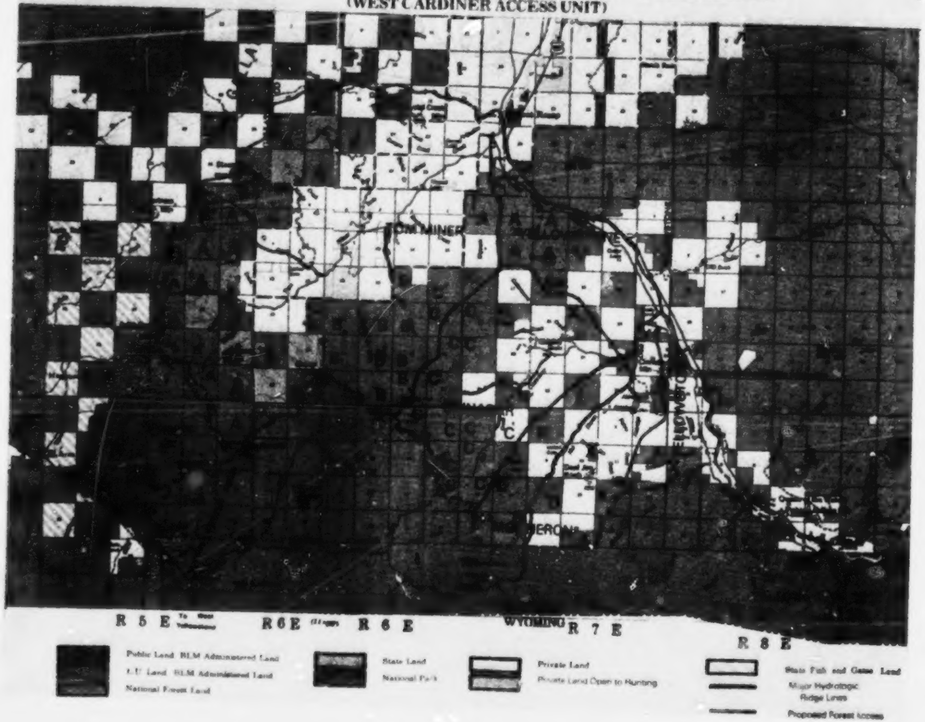
The Forest Service, however, states that the area "needs" access and tends to overlook the fact that there is access now commensurate with the best use of the land for hunting, recreation and wildlife.

Of the total 66 Forest Service sections, 58 (or 88%) are now accessible, and 6 of the 8 isolated remaining sections would not be available even with additional access! The percentages below are based on the 58 presently accessible sections:

A = 0 - 3 (31 or 53%)
B = 3 - 6 (9 or 16%)
C = 6 - 9 (15 or 26%)
D = 9 - 11 (3 or 5%)
X = no access as isolated

The corresponding letters on the sections on the maps indicate the above air miles from either the Forest Service campground or from public roads.

NORTHERN YELLOWSTONE RIM ALLIANCE AREA
(WEST GARDINER ACCESS UNIT)


TOM MINER
R 5 E
To West Yellowstone
R6E
R 6 E
WYOMING
R 7 E
R 8 E
Public Land BLM Administered Land
L.U. Land BLM Administered Land
National Forest Land
State Land
National Park
Private Land
Private Land Open to Hunting
State Fish and Game Land
Major Hydrologic Ridge Lines
Proposed Forest Access

Defenders
OF WILDLIFE

TESTIMONY OF DEFENDERS OF WILDLIFE
BEFORE THE
SUBCOMMITTEE ON PUBLIC LANDS AND
THE SUBCOMMITTEE ON NATIONAL PARKS AND RECREATION
REGARDING
MANAGEMENT OF THE GREATER YELLOWSTONE ECOSYSTEM
OCTOBER 24, 1985

Mr. Chairman, we appreciate the opportunity to offer the following comments on behalf of Defenders of Wildlife and its 68,000 members nationwide concerning management issues relating to the Greater Yellowstone Ecosystem.

We would like to note at the start that Defenders of Wildlife was one of the founding organizations of the Greater Yellowstone Coalition, and that our Northern Rockies field representative, Hank Fischer, was on the original board. Defenders' Great Basin field representative, Dick Randall, has also been deeply involved in Yellowstone issues.

We would like to emphasize that our interests with establishing and defining a Greater Yellowstone Ecosystem stem primarily from our concerns for two key wildlife species, the grizzly bear and the Rocky Mountain wolf. Because these two species are so wide-ranging and have need for habitat secure from human intrusions, their required range extends well outside the established boundaries for Yellowstone National Park. In 1872, when Ulysses S. Grant signed the legislation that created Yellowstone Park, our scientists had little knowledge of ecosystems and the interrelationships of various wildlife species. Certainly the government campaigns to kill predators like the wolf, grizzly and mountain lion throughout the early part of this century are testimony that we have only become more sophisticated in the understanding of wildlife population dynamics during the last few decades.

Our experience with grizzly bear management reveals that protection of Yellowstone Park alone will not be adequate to recover the grizzly. The bear is too wide-ranging, and the habitat is not rich enough to support a viable bear population completely within park boundaries. Perhaps equally important, without adquate restrictions outside the park, bears can learn bad habits about food and people that may cause problems within the park.

At the same time we see problems outside the park; that's not to imply that all's well with grizzly management within. A case in point is the issue regarding the removal of the Fishing Bridge

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facility. Even though the National Park Service agreed to remove Fishing Bridge as the price for building Grant Village, even though the U.S. Fish and Wildlife Service has said that having both facilities operational will present a "jeopardy" situation for grizzly bears, it appears federal agencies have lost their resolve to do what's necessary to safeguard the grizzly. It's clear powerful political interests are keeping these agencies from doing what's right.

It's a fact of life that current management of the Yellowstone Ecosystem involves two national parks, two national wildlife refuges, portions of seven National Forests, as well as some key private lands. Those with management authority include the National Park Service, the U.S. Fish and Wildlife Service, the Bureau of Land Management and the states of Montana, Wyoming and Idaho. Because of the varied missions and different political constraints, effective management of Yellowstone wildlife resources can be elusive.

We believe the record concerning recovery of the Rocky Mountain wolf is a case in point. The wolf was originally listed as an endangered species when the Endangered Species Act (ESA) was passed in 1973; at that time, expedient recovery of the wolf--to the point where listing and the protection of the ESA was no longer necessary--became the national policy of our country. Nevertheless, wolf recovery in Yellowstone has languished since passage of the ESA, and one major contributing factor is that no single agency has been willing to take the lead. While the Wolf Recovery Team, appointed by the U.S. Fish and Wildlife Service, has tried to carry the ball, at some point it's up to the land management agencies--primarily the Park Service and the Forest Service--to take the responsibility. To the extent state agencies--and remember, that includes Idaho, Montana and Wyoming--don't cooperate, the land management agencies are stymied.

In principle, everyone agrees that wolf recovery makes perfect sense in Yellowstone; it appears to be one issue where state and federal agencies concur. After all, it's the state wildlife agencies that complain most vociferously about ungulate (deer, elk, etc.) overpopulations in the park; clearly, wolf recovery could help ease that problem. Second, it's the Park Service which has emphasized "natural management" as the key to maintaining balanced wildlife populations in the Park. The Park Master Plan plainly identifies wolves as an important component of that "natural" system.

According to the Park Service, Yellowstone is only three species short of having all the species present in 1800: the peregrine falcon, the whooping crane and the Rocky Mountain wolf. Peregrine recovery has recently made significant strides in the Yellowstone ecosystem; a recovery program at Red Rock Lakes National Wildlife Refuge--only a few miles west of the park--has been quite successful. In 1985, for the first time in many decades, a whooping crane was present in Yellowstone Park; there's certainly the possibility for more as the Grays Lake flock in Idaho grows. That leaves only the wolf.

There are several reasons why wolf recovery will require carefully coordinated agency management. First of all, the key to a Yellowstone recovery program will be the implementation of a zone management program. This zoning approach will result in designation of some areas where wolf recovery is the highest priority, other areas where wolf recovery is an important consideration as well as other areas where wolf recovery will not be an objective. These zones should be based primarily on the biological needs of wolves, and not upon the arbitrary land management boundaries. Such a zoning approach would carefully avoid recovery in areas where wolf-human conflicts would be high.

A second key to Yellowstone wolf recovery is the development of a compensation program to repay livestock operators for animals lost to wolves. Given the various state and federal jurisdictions, such a program could be extremely complex to administer without careful coordination. We feel that having an efficient program to deal with problem animals is key in order to gain acceptance by livestock interests. The Minnesota state program has been quite successful in reducing conflict between livestock interests and wolf recovery there.

This isn't to say that we anticipate wolf recovery will cause hardship for livestock operators in the Yellowstone area. It should be understood that all of the proposed recovery areas in the Northern Rockies were specifically chosen for their remoteness, high percentage of public lands and low numbers of livestock. In Yellowstone, for instance, most of the primary wolf recovery area lies within national parks or designated wilderness areas where there is little or no livestock use; only about 1% of the Yellowstone wolf recovery area is in private ownership.

Even if wolf-livestock problems do occur--and certainly some may-- there's every expectation they can be handled promptly and satisfactorily. In Minnesota, where an estimated 1,200 wolves roam over a much smaller area without nearly the amount of unbroken public ownership, federal officials typically respond to depredation complaints within 24 hours and attempt to control the offending animal; wolves are killed if necessary, and livestock operators are compensated for all wolf-killed livestock.

But the most significant statistic in the Minnesota wolf experience has been just how small the amount of conflict has been. Although there are more than 9,800 livestock operations within wolf range in northern Minnesota, an average of only 22 operations per year sustain any losses at all (Fritts, 1983).

According to this same study, the total combined losses to wolves for all livestock operations in Minnesota between 1979 and 1981 amounted to only 5 cows, 16 calves and 56 sheep.

The Yellowstone ecosystem is not only far more remote than northern Minnesota, but it has large blocks of public land and low concentrations of livestock. And perhaps as important as anything else, it has such a terrifically abundant prey base it's hard to imagine why a wolf would risk taking livestock.

A survey by University of Montana graduate students of Yellowstone Park visitors' attitudes this summer concluded that they favor wolf reintroduction by 3 to 1 and agreed that wolf recovery should not be subordinted to various human interests.

We believe the time has come for our federal agencies to move forward with wolf recovery in Yellowstone, but we recognize this can only take place through an intensively coordinated effort. The past decade of inaction serves as testimony that the current system isn't even getting the job started, let alone completed. We would strongly urge these committees to investigate any approaches that would facilitate more coordinated management of the Yellowstone region. The resources are too important not to receive our best efforts.

NINETY NINTH CONGRESS

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February 3, 1986

Mr. R. Max Peterson
Chief
Forest Service
U.S. Department of Agriculture
Washington, D.C. 20250

Dear Chief Peterson:

Thank you for your recent letter and additional information on the status of the "Ski Yellowstone" development project. We will include it in the record from the October 24, 1985 joint oversight hearing on the Greater Yellowstone Ecosystem held by the Subcommittees on Public Lands and National Parks and Recreation. I appreciated your clarification of the process by which permits for planning and construction are issued.

I would appreciate a copy of the cumulative effects analysis for grizzly bears when that is available.

Attached are copies of correspondence between Mr. Thomas McNamee and Mr. Reid Jackson, which Mr. McNamee submitted with his testimony at the hearing. Mr. McNamee observed in August of 1980 and 1985 that outfitters in the Teton Wilderness were violating rules on number of people on trips, length of occupancy and garbage disposal. Mr. Jackson, the forest supervisor for the Bridger-Teton Forest, indicated in September 1985 that he would again encourage wilderness rangers to enforce regulations and would investigate specific outfitters. I would appreciate your comment on the situation with outfitters in the Bridger-Teton National Forest at this time.

Sincerely,

John Seiberling

JOHN F. SEIBERLING
Chairman, Subcommittee
on Public Lands

cc: Honorable Bruce F. Vento, Chairman,
Subcommittee on National Parks and Recreation
Honorable Ron Marlenee
Honorable Dick Cheney
Honorable Robert J. Lagomarsino
Honorable Pat Williams
Honorable Larry E. Craig
Honorable Richard Stallings

United States
Department of
Agriculture

Forest
Service

Bridger-Teton
National
Forest

P.O. Box 1888
Jackson, WY 83001

Reply to: 2670

Date: SEP 26 1985

Mr. Tom McNamee
34 W. Ninth Street
New York, NY 10011

Dear Tom:

Thank you for your letter regarding your followup observations of conditions in the Teton Wilderness especially as they relate to grizzly bear management. I share your concern about general conditions in the Wilderness and particularly about the situation you reported with Randy Haecker's camp.

I want to assure you that guide and outfitter camp conditions, such as you describe, will not be allowed in the Wildernesses, least of all in Situation I habitat. Enclosed are two letters I have sent to our guides and outfitters and our District Rangers to emphasize my direction regarding camp conditions. There should be no doubt among the commercial interests that the grizzly bear stipulations will be enforced this year. As you can see I have asked our personnel to make a special contact with Randy regarding his situation and will have a report back to me with their findings.

Thank you for your continued interest in the bear and your willingness to put your concerns in writing. I feel confident we can achieve bear recovery through a consistent education and enforcement effort.

Sincerely,

Reid Jackson
REID JACKSON
Forest Supervisor

Enclosures

United States Department of Agriculture
Forest Service
Bridger-Teton NF

Reply to: 2710 Special Use Permits (2670)

Date: SEP [illegible]

Subject: Enforcement of Grizzly Bear Regulations

To: District Rangers, Jackson RD and Buffalo RD

The enclosed letter from Tom McNamee together with my previous letter to him of September 5, 1980 are self-explanatory.

I have not personally observed any of the outfitter camps this field season; however, I suspect that much of what Tom has written is true. If only a portion is true, we have much work ahead of us.

Now that the big game season is upon us, we will be conducting several law enforcement trips into the wilderness to enforce compliance with the special order and terms of special use permits as they relate to grizzly bear recovery. We will also be enforcing the Greater Yellowstone Outfitter Policy (GYOP) as it applies to your district.

I want to make it clear that you and your people are to enforce all of the special order requirements as well as the terms of special use outfitter permits and the GYOP. All of our outfitters are well aware of the requirements and if they fail to abide by them I expect you to issue citations and to take other followp action, up to and including recommendations for permit cancellation if necessary.

You should also plan to enforce the order as it applies to the general public; however, I expect you to use some judgment with the public and continue with an educational effort where possible, and use the citation in the more flagrant cases.

Please see that your Wilderness Rangers; Level IV Law Enforcement Agents; and others see this memorandum and take followup action accordingly.

In addition, I would like to have you make a special effort soon to contact Randy Haecker's camps as well as those of Billings and any other outfitter who has been a problem in the past. You should document what you find and the corrective action taken by both the outfitter and yourself and furnish a copy to me. These contacts should be made in company with a Level IV Law Enforcement Agent.

If you have any questions in regard to any aspect of this memorandum, please let me know.

Reid Jackson
REID JACKSON
Forest Supervisor

Enclosures

United States
Department of
Agriculture

Forest
Service

Bridger-Teton
National
Forest

P.O. Box [illegible]
Jackson, WY 83001

Reply to: 2670

Date: August 12, 1985

All Outfitters/Guides and Outfitter Associations

Enclosed is the special use regulation that will go into effect August 15 on the Bridger-Teton National Forest in areas occupied by grizzly bears (Management Situation 1). This is the second year that the special regulations have been implemented. The regulations will be enforced.

The regulations are designed to reduce the possibility of bear-human confrontations as well as to protect the grizzly bear, which is classified as a threatened species under the Federal Endangered Species Act.

Beginning in mid-August, parties visiting grizzly country will be required to properly store and thereby make unavailable to bears all game meat, fish, and human and prepared livestock food. Your cooperation will help prevent bear-human conflicts and the possible unnecessary death of a bear or worse.

If you have any questions as to the regulations, or would like to discuss methods to properly store foods and attractants, please contact your District Ranger. We appreciate your help in maintaining the grizzly as part of our natural heritage.

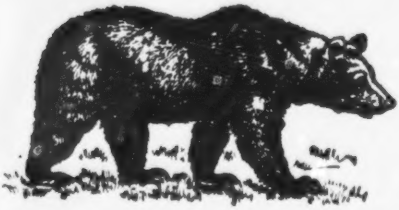
Sincerely,

Reid Jackson

REID JACKSON
Forest Supervisor

Enclosures

FS-6200-28(7-82)



34 W. Ninth St.
New York, N.Y. 10011
August 26, 1985

Mr. Reid Jackson
Bridger-Teton National Forest
Box 1888
Jackson, Wyo. 83001

Dear Reid:

On August 6, 1980, after my first trip into the Teton Wilderness, I wrote to you to complain about the lousy trail and campsite conditions there.

(You and I had not yet met at that time, and I didn't know much of anything about grizzly bears. I wasn't even aware that that situation could be dangerous, to both bears and people. But it was the sight of some grizzly tracks along the upper Yellowstone on that trip that led to my learning about grizzlies, and eventually to my writing and publishing The Grizzly Bear, and ultimately to my meeting you.)

You wrote me back a very detailed and gracious response on September 5, 1980, and I have enclosed a copy of your letter herewith.

I've been back to that country three times since then, most recently just last month, and I'm sorry to say that conditions have if anything steadily worsened. This summer, several outfitters were obviously abusing their privileges beyond all reason. Two sites in particular, both of which had been much used by Randy Haecker's parties, were really unspeakable messes. One of them, I was told by various frequent wilderness users, had been occupied continuously all summer, and Haecker had consistently violated the rules on number of people, number of stock, length of occupancy, and garbage disposal. It has never been proved in court, but I'm sure you know that Haecker has several times been suspected of killing grizzlies, and his camps are notoriously sloppy and filled with bear attractants. The one I visited, at the edge of the Yellowstone Meadows just south of Atlantic Creek, was a nightmare--the wet meadows trampled, food all over the place, garbage piled up. I talked to the wilderness ranger on the trail out, and he said that he had been told not to issue any citations, although he had very much wanted to. So once we were out, I went to the district ranger, and he assured me that some sort of "agreement" was being worked out with Haecker, and that he anticipated compliance with the rules in the near future. He also added that he was contemplating use limitations in some of the most severely degraded areas, such as lower Atlantic Creek.

Just to be sure my point was made, I also dropped by the forest headquarters in Jackson, and I met there with John Combs, who also assured me that action was going to be taken.

And now, of course, as I'm sure you know, we have the year's second dead grizzly on the B-T, a female, I'm told, probably a yearling, killed (where else?) at an outfitter camp--a camp, moreover, which had been much used last year by none other than Randy Haecker; a camp where Haecker and his staff had fed a grizzly cub, turning it into virtually a camp pet. It can never be proved, of course, but I'll just bet you that that habituated bear was the one just recently killed in the Thoroughfare. As you may know, last year's camp pet and this year's dead bear were the same color, the dead bear was about the size you'd expect that bear to have become, and the place was the same. In any case, by anybody's definition, this recent mortality could certainly be categorized as preventable.

What could have been done to prevent it? The existing rules could have been enforced. This cannot be merely a question of tight budgets. This very summer, you had a wilderness ranger in there who wanted to write citations but was not allowed. Outfitters on the B-T have long shown themselves to be a particularly quarrelsome and uncooperative group, I know, and by long tradition many of them consider the wilderness "theirs." I know--I've talked to lots of them, and they consider the rules on game meat storage, horse feed, and dozens of other grizzly attractants to be just so much nonsense to be gotten around. And why? Because, in the end, they have known they could get away with it. Suppose, just for the sake of argument, that it was Billings who killed this recent female grizzly. Maybe he ought not to have been allowed to operate in the Teton Wilderness. Hadn't he already been in trouble before? And what about Haecker, the most atrocious of them all? Time and time again he's shown his contempt for the Forest Service, the Game and Fish Department, and all their rules and regulations--because time and time again he has gotten away with violating them, with utter impunity.

Surely, Reid, you must recognize that this is an outrage. Isn't it time for something strong, decisive, and serious to be done?

With best wishes,

Tom

Tom McNamee

Submitted as supplement to testimony of Thos McNamee

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Bridger-Teton National Forest, Box 1888, Jackson, WY 83001

2320
2720
September 5, 1980

Mr. Thomas McNamee
34 W. Ninth Street
New York, N.Y. 10011

Dear Mr. McNamee:

Thank you for your letter of August 6, 1980. Although I cannot promise immediate correction of many of the problems which you pointed out, your letter does put the issues in clearer focus, and stimulates us even more to search for solutions. As you said in the last sentence of your letter, people like you don't make my job easier. However, no one told me the job would be easy, and I think that we both have a very similar basic interest--to protect the wilderness resources of the Bridger-Teton Forest while still providing quality recreational experiences for growing numbers of visitors. That is a real challenge.

Your letter hinted that adequate funding may be a problem. It is correct that we do not have adequate funds for wilderness administration, and we expect even tighter budgets in the next few years. Rapid inflation during a period of stable or reduced budgets has resulted in serious reductions in what can be accomplished in work on the ground. We have reduced many of the services formerly provided. The numbers of wilderness rangers in both the Bridger and Teton Wildernesses have been reduced each year for the past several years. We have also reduced public information and education programs, particularly in the Bridger, and this must have a direct adverse influence on the conduct of many wilderness users. Trail maintenance activities have also been cut back severely. We foresee no funds in the next few years for reconstruction of substandard trail segments, even where erosion or safety are problems.

Because we are unable to accomplish many of the objectives contained in the management plans for the two Wildernesses, we consider them to be managed at a "reduced-service level." Under this management level, it is our intent to provide essential services while protecting the wilderness resource. From your comments, and our own observations, it appears that wilderness values are being degraded somewhat under today's types and levels of use. The problems of overuse, concentrated use, and pack and saddle stock impacts have been recognized for some time, however, and we have been working to find solutions.

In the Bridger Wilderness, special restrictions were implemented in 1978 for the seven areas of most concentrated use. We believe that these measures will improve user distribution and reduce impacts. The restrictions are shown on the enclosed map.

Limitations on number of persons and number of horses per group have been in effect in both Wildernesses (see attached June 22, 1978 Public Notice). More restrictive limitations are now being considered for the Teton Wilderness, at least for Yellowstone Meadows and the South Buffalo Fork. Although carrying capacity has not been determined, it appears that the social carrying capacity of these concentration areas may already be exceeded during the summer fishing and fall hunting seasons.

In the Bridger, a moratorium that limits commercial outfitting use to the 1973 level is now in effect until carrying capacity of the Wilderness can be determined. We are presently collecting the data needed to determine capacity. A similar moratorium limiting outfitter use to present levels is also being considered for the Teton.

Capacity determinations for both Wildernesses have been delayed because of limited budgets. We will address the problems you mentioned of litter, firewood, stumps, and campsite condition when carrying capacities are established.

We are working with outfitters to disperse pack trips. As you realize, this is very difficult in situations such as the Teton during fishing season where use is concentrated along the best fishing streams and where trails provide the only reasonable access. Catching and throwing spawning trout out of the streams by hand is illegal, and we will take action to eliminate such activities when they become known to us.

We feel that public education is perhaps the most important effort to be made to reduce the impacts of human use. Our wilderness rangers, interpretation employees, and office staff attempt to educate in wilderness ethics and no-trace camping in all contacts with the public. To be really effective, we need to increase these contacts, and also to have sufficient numbers of wilderness rangers to enforce the restrictions in effect.

The National Park Service has been able to minimize the outfitter problem through a reservation system for designated campsites and the establishment of more restrictions, including those on hunting and fishing. Our feeling has been that we should apply only those restrictions needed to protect wilderness values in specific areas. Where National Park lands abut the Teton Wilderness at Yellowstone Meadows, there is a significant difference in the level of use because of these differences in management philosophies. For the majority of visitors, backcountry camping is not as desirable in the Park because of the reservation system and the restrictions. Resource impacts may eventually cause us to establish use limitations through a permit system, but hopefully with fewer restrictions.

More effort is needed to encourage users to pack out unburnables, through signing and contacts. Commercial outfitters are complying with this requirement. You are correct that large pack trips are the greatest offenders, and some parties still believe that burying garbage is proper. Our wilderness rangers are trying hard to correct this misconception, but it is impossible to contact everyone. In my observations during recent trips to the Wilderness, I believe that there has been some improvement in the littering problem. More people are packing out unburnables. Much of the litter is of older vintage, and it remains a Forest Service responsibility to clean up the old messes that often encouraged further littering.

Although stumps certainly demonstrate the human presence, this has not been pointed out to us before as a serious problem. We will consider the possibility of eliminating cutting of standing dead trees for firewood.

Your letter mentions the eyesore of the permanent camp in Atlantic Creek Meadow. There is no permanent camp in the Meadow. There is a hunting base camp east of Two Ocean Pass, but this camp is completely dismantled during the summer, and nothing remains except a few posts in the ground and some hidden poles. The outfitter camp you saw must have been operating without a permit. Illegal outfitting is a growing problem. We take action whenever illegal activities become known to us. Beginning this fall, the several Forests in the area surrounding Yellowstone National Park will start a concerted effort to control illegal outfitting.

The issue of grazing in wilderness will probably remain a controversial one. You are correct that the Wilderness Act provides for continuance of existing grazing. Congress has more recently provided direction for management of grazing in wilderness in the form of guidelines which appeared in the Conference Report on S. 2009, the Central Idaho Wilderness Act of 1980. In part, these guidelines state the following:

> .....There shall be no curtailments of grazing in wilderness areas simply because an area is, or has been designated as wilderness, nor should wilderness designations be used as an excuse by administrators to slowly "phase out" grazing. Any adjustments in the numbers of livestock permitted to graze in wilderness areas should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range condition, and the protection of the range resource from deterioration.
>
> It is anticipated that the numbers of livestock permitted to graze in wilderness would remain at the approximate levels existing at the time an area enters the wilderness system.....

The impacts of grazing in the Bridger Wilderness are being assessed by an interdisciplinary team this summer, and their findings will be reflected in the grazing plans of the evaluated grazing allotments. Impacts of grazing on the wilderness resource and on wildlife will be considered.

Our interest, like yours is to preserve the spirit of wilderness. It is a difficult job in view of the many conflicting interest. I, personally, have been able to enjoy the blessings of wilderness more than most people, and I want that spirit to remain for future generations. The conditions which you point out are not the result of lack of concern by the District Rangers and others on the ground. They are very concerned about the impacts brought about by use, and the possible threat of even greater numbers of people which you mention. We are committed to reduce the impacts. Attempts to instill respect for wilderness will continue and we will enforce the rules to the greatest extent possible with the dollars and manpower available to us. We feel that limits on numbers of users should be a last resort, but that may be coming sooner than we would like.

Again, thanks for your concern in writing to me.

Sincerely,

REID JACKSON
Forest Supervisor

Encl. 1. Bridger Wilderness Seven Management Areas map
2. Public Notice 6/22/78

[illegible]

United States
Department of
Agriculture

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Service

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Office

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Washington DC 20013

Reply to 2320

Date MAR [illegible] 1986

Honorable John Seiberling
Chairman, Subcommittee on Public Lands
Committee on Interior and Insular Affairs
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your letter of February 3 requesting information on the status of outfitter activities in the Teton Wilderness and the cumulative effects study on grizzly bears.

We appreciate and share your concern about the management of outfitters on the Teton Wilderness. We fully support the direction given by the Forest Supervisor, Reid Jackson, to monitor and enforce compliance with regulations and the terms of outfitter special-use permits.

Since these concerns were surfaced, Forest Service personnel made numerous inspection trips to Randy Haecker's outfit during the fall operating season and found him in compliance with the terms of his permit. Another outfitter was given notice to implement certain actions that would bring them within the terms of their permit, and they made those corrections. A summer camp was found to have unacceptable heavy-horse use in the area. Corrective action on this situation will be implemented this summer.

The report on the cumulative effects analysis for grizzly bears will not be completed until next fall. We completed an analysis model in October 1985. This model will be tested this summer for the Yellowstone ecosystem. If you would like to discuss this and other cumulative effects studies in more detail, please feel free to contact Dr. John Weaver, Forest Service Coordinator for Grizzly Bear Management. He has a videotape and background materials on these studies. Dr. John Weaver's phone number and address are: Northern Region, USDA Forest Service, P.O. Box 7669, Missoula, Montana 59807; Phone: FTS 585-3664 or 406-329-3511.

Sincerely,

for
R. MAX PETERSON
Chief

Enclosure

FS-6200-11 (8-80)